2015 CAQH Index®

Electronic Administrative Transaction Adoption and Savings

Calendar Year 2014

CAQH® Explorations | INDEX®

Table of Contents

EXECUTIVE SUMMARY

There is widespread consensus that administrative costs in healthcare are excessive. By some estimates, more than $31 billion each year is spent by healthcare providers alone conducting basic business transactions with health plans. A good portion of this expense can be attributed to resource-intensive manual processes, such as phone calls to verify patient coverage or mailing claims and paper checks.

An industry-wide transition to replace manual processes with electronic, real-time transactions is ongoing to reduce the cost of doing business in healthcare and meaningfully impact efficiency, productivity, and data quality. Several key industry-led initiatives, as well as legislative and regulatory actions, have propelled adoption of electronic claims-related transactions forward, with incremental progress occurring over recent decades and accelerating dramatically in recent years. Measuring the progress of this transition helps identify which electronic transactions are being adopted successfully and which are being adopted at a slower pace, highlighting a potential need for targeted support to further drive greater adoption.

The CAQH Index® is the industry source for monitoring this transition. This annual report presents trends in adoption rates and cost savings associated with the shift to electronic transactions, based on surveys of healthcare providers and health plans. Participating health plans represent over 118 million covered lives – nearly 45 percent of the commercially insured U.S. population – and more than 4 billion claims-related transactions conducted in 2014. The 2015 CAQH Index includes several notable enhancements. Specifically, the Index now analyzes adoption rates for coordination of benefits (COB) claims and referral certifications. It also includes data from the dental industry, representing over 92 million covered lives and 440 million transactions – over 40 percent of the U.S. population with commercial dental insurance.

Significant findings include:

- **Adoption of fully electronic transactions continues to vary significantly among transactions.** In 2014, adoption rates for fully electronic[1] transactions using standards adopted by the Health Insurance Portability & Accountability Act (HIPAA) were:

Claim submission	93.8%
Eligibility and benefit verification	70.5%
Claim payment	61.4%
Claim status inquiry	56.5%
Remittance advice	49.6%
Coordination of benefits (COB) claims	48.7%
Prior authorization	10.2%
Referral certification	6.2%

- **Three-year (2012-2014) trend shows a steady, but modest, increase in the adoption of fully electronic transactions. Accelerated adoption of some transactions is promising.** Growth in adoption over the three-year period improved across the six transactions originally studied by the

[1] Fully electronic transactions are electronic for both health plans and providers using adopted HIPAA standards.

CAQH Index (claim submission, status inquiry, and payment; eligibility and benefit verification; prior authorization; and remittance advice). In 2014, the average increase in adoption across transactions was +4.5 percentage points, compared to +3.0 percentage points in 2013. Of note, the greatest increases in adoption in 2014 were for claim status inquiry (+6.9%) and eligibility and benefit verification (+5.2%), for which federally mandated compliance with operating rules for HIPAA standards became effective in 2013.

- **Despite increasing adoption of fully electronic transactions, the volume of telephonic inquiries has remained stable for eligibility and benefit verifications and claim status inquiries.** Eligibility and benefit verifications and claim status inquiries are far less costly when conducted electronically, offering a huge savings opportunity for health plans and providers. As noted, the use of fully electronic transactions is increasing, but in 2014 responding health plans still reported over 120 million transactions in which representatives of the health plans and healthcare providers connected telephonically to complete the transaction. Several factors contributing to the stable volume of manual transactions, despite increasing volume of electronic transactions are discussed in this report.

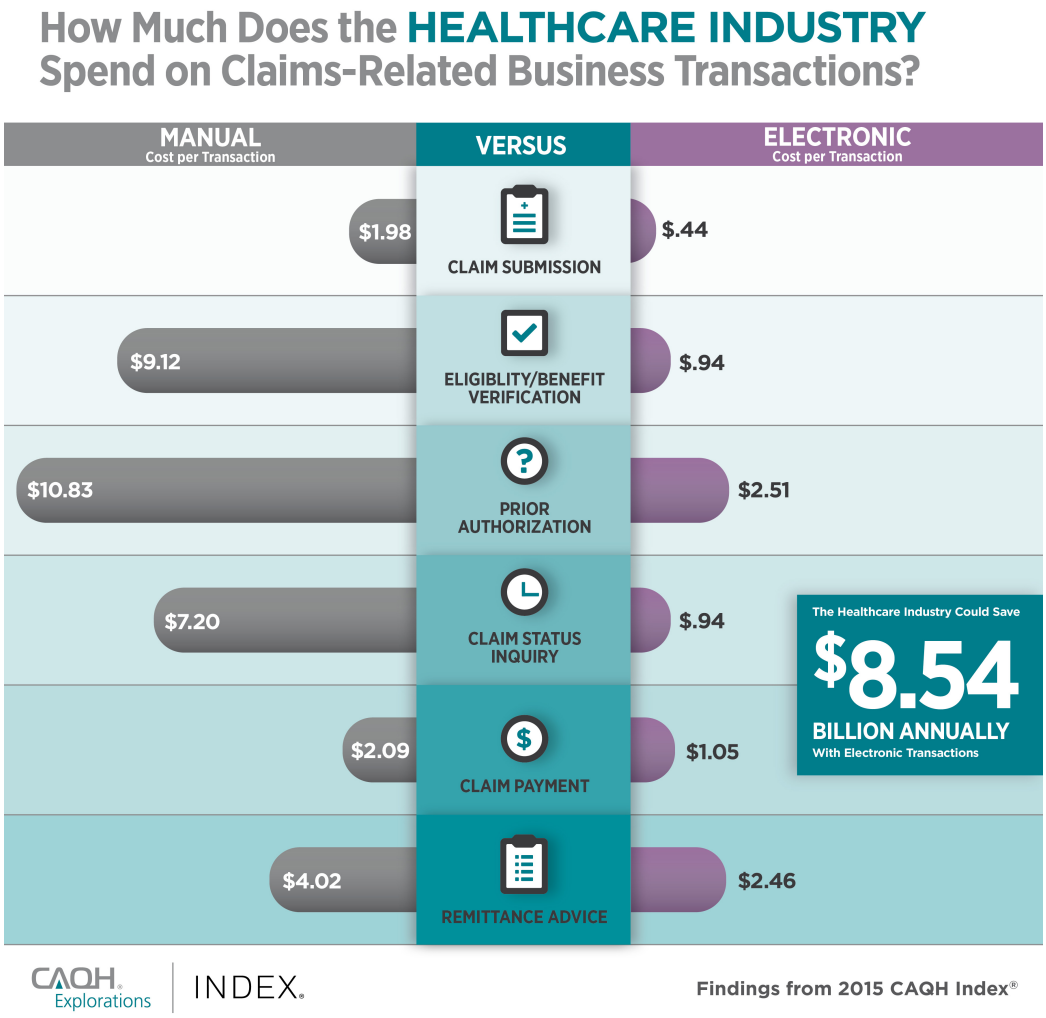
- **Use of partially electronic methods[2], such as health plan-sponsored web portals and interactive voice response (IVR) systems, continues to increase for some transactions, but is declining for others.** Use of partially electronic transactions continues to increase for some transactions and is the most common method for prior authorizations (58.2%) and referral certifications (82.1%). For other transactions, for example, eligibility and benefit verifications and claim status inquiries, the volume of partially electronic transactions continues to decline, while fully electronic is increasing.

- **For the dental industry, adoption of fully electronic transactions was lower overall and variable across transactions.** In 2014, adoption of fully electronic transactions using HIPAA standards was significantly lower for the dental industry as compared to the broader healthcare industry, ranging from nearly 17 percentage points lower for eligibility and benefit verifications to 55 percentage points lower for claim payment. Adoption rates were: claim submission (69.5%), eligibility and benefit verification (56.2%), claim status inquiry (27.4%), and claim payment (6.4%). Similar to the broader healthcare industry, many transactions were conducted via web portals and IVR systems. A notably larger share of claim status inquiries were conducted using web portals and IVR systems, compared to broader healthcare (46.3% vs. 34.2%).

- **The direct labor cost per transaction continues to vary considerably across transactions and methods. Manual transactions are far more costly than electronic transactions, particularly for healthcare providers. On average, manual transactions each cost providers and health plans approximately $2 more than each electronic transaction.** For health plans, direct costs averaged $2.30 per manual transaction and $0.04 per electronic transaction for the six originally tracked transactions (listed above and identified in Table 1). For healthcare providers, direct costs averaged $3.54 per manual transaction and $1.34 per electronic transaction. The industry (providers and health plans combined) cost averaged $5.87 per manual transaction and $1.34 per electronic transaction.

[2] Partially electronic transactions are automated for health plans, but require manual effort by providers.

- **In total, transitioning from fully manual to fully electronic processes for the six transactions studied alone could save commercial health plans and healthcare providers approximately $8.5 billion annually.** This analysis estimates 16 billion administrative transactions flowed between commercial health plans and healthcare providers in 2014. Of the 16 billion, health plans processed an estimated 900 million manually in 2014, and another 2.5 billion were conducted manually by healthcare providers. If the industry were to adopt electronic processes for these manual transactions, the annual savings is estimated to be $1.7 billion for health plans and $6.8 billion for healthcare providers.



These findings demonstrate the urgent need for further action. While the healthcare industry has made significant progress, the transformation is far from complete. To facilitate more rapid adoption of electronic transactions, specific actions are outlined in this report for industry consideration:

1. **Share and expand best practices to increase adoption of electronic transactions and reduce utilization of manual transactions among industry stakeholders by accelerating industry- and government-led outreach and education for health plans, healthcare providers, and their agents, including practice management system (PMS) vendors;**

2. **Evaluate sufficiency of current government regulations and federal strategic plans to support broad adoption of fully electronic transactions for health plans, healthcare providers, and their agents;**
3. **Increase targeted government- and industry-led efforts to reduce adoption barriers for health plans and healthcare providers, including consideration of financial incentives and contractual requirements;**
4. **Continue systematic review of business processes for potential improvements of technical and policy requirements that can improve efficiency and reduce cost; and**
5. **Improve uniform and systematic tracking and reporting of adoption – and related cost savings – by healthcare providers, health plans, and their agents.**

The CAQH Index will continue to monitor industry progress to adopt electronic transactions. Through additional enhancements to the Index, CAQH will help address the need for robust industry data that can further inform efforts to drive this transition. A sustained effort by healthcare providers, health plans, related business partners, government agencies, and other key stakeholders is essential to propel the transition to electronic administrative transactions successfully forward.

BACKGROUND

Healthcare remains a significant and growing source of spending in the United States, reaching nearly $3 trillion in 2014 alone.[3] While many solutions to address this growth are being explored, there is a well-established opportunity for savings by reducing inefficiencies in the ways that healthcare providers (both clinical practitioners and facilities) and health plans interact.[4,5,6] One study estimated that U.S. physicians spend up to $31 billion each year on business-related communications with health plans.[3] Last year, CAQH reported the potential annual savings from full adoption of six of the most common electronic administrative transactions could reach $8 billion within the commercial healthcare market alone.[7]

Healthcare has lagged far behind other industries in meeting the critical need to share large quantities of data quickly and accurately. Over the past two decades, however, several industry- and government-led initiatives have contributed to increased adoption of electronic administrative transactions. In particular, the development of technical standards and supporting operating rules have provided the direction needed to enable improved exchange of electronic data. The history of these initiatives includes:

- **1996** – HIPAA established and mandated the use of standards for transactions when interacting electronically among healthcare providers, health plans, and clearinghouses (entities that conduct business transactions on behalf of health plans and providers).[8] However, HIPAA established standards for only a subset of the most common transactions, provided limited guidance on how they should be implemented and virtually no enforcement.
- **2005** – CAQH established CORE®, a multi-stakeholder collaboration of providers, health insurance plans, vendors, government agencies, and standard-setting bodies to develop voluntary operating rules that address the need for uniform implementation of the standards for electronic transactions.
- **2007** – CAQH CORE began voluntarily certifying healthcare providers, health plans, clearinghouses, and vendors that were compliant with the first set of operating rules.
- **2010** – The Patient Protection and Affordable Care Act (ACA) of 2010 included a federal mandate for the development of standards for claim payment and claim attachments and for the creation of operating rules to support the implementation of all HIPAA standards. In addition, the law required formal certification of compliance for health plans.[9]
- **2012** – CAQH Index first began tracking and reporting national adoption and cost of the most recognized administrative transactions (identified in Table 1).
- **2013** – ACA-mandated operating rules for eligibility and benefit verification and claim status inquiry HIPAA standards became effective for all HIPAA-covered entities.

[3] Health Costs: Health Spending Explorer. Kaiser Family Foundation, 2015
[4] Casalino, L. P., Nicholson, S., Gans, D. N., Hammons, T., Morra, D., Karrison, T., & Levinson, W. (2009). What does it cost physician practices to interact with health insurance plans?. Health Affairs, 28(4), w533-w543.
[5] Morra, D., Nicholson, S., Levinson, W., Gans, D. N., Hammons, T., & Casalino, L. P. (2011). US physician practices versus Canadians: spending nearly four times as much money interacting with payers. Health Affairs, 30(8), 1443-1450.
[6] Jiwani, A., Himmelstein, D., Woolhandler, S., & Kahn, J. G. (2014). Billing and insurance-related administrative costs in United States' health care: synthesis of micro-costing evidence. BMC health services research, 14(1), 1.
[7] 2014 CAQH Index® Report. CAQH. Accessed at: http://www.caqh.org/explorations/2014-caqh-index-report
[8] The Health Insurance Portability and Accountability Act of 1996 (HIPAA) P.L. No. 104-191, 110 Stat. 1938 (1996).
[9] The Patient Protection and Affordable Care Act P.L. 111-148 (2010)

- **2014** – ACA-mandated operating rules for electronic funds transfer (EFT) (e.g., claim payment) and electronic remittance advice (ERA) HIPAA standards became effective for all HIPAA-covered entities.

Table 1: Overview of Healthcare Administrative Transactions in the CAQH Index®

Transaction	Adopted HIPAA Standard	Description	Year Added to CAQH Index®
Claim Submission	ASC X12N 837	A request to obtain payment or transmission of encounter information for the purpose of reporting health care.	2013
Eligibility and 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 plan, and a response from the health plan to a provider.	2013
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.	2013
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.	2013
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.	2013
Remittance Advice†	ASC X12N 835	The transmission of remittance advice, including final adjudication and reasons for adjustments, from a health plan to a provider.	2013
Claim Attachments	No standard adopted by HHS	Additional information submitted with claims or claim appeals, such as medical records to support the claim.	2014
Prior Authorization Attachments	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.	2014
Coordination of Benefits Claim	ASC X12N 837	COB claims are a subset of all claim submissions above. We define COB claims as those sent to secondary payers with an attached or included explanation of payment information from the primary payer.	2015
Referral Certification	ASC X12N 278	Referral certification is a request from a healthcare provider to a health plan for permission to refer a patient to another provider. While this transaction includes an element of the Prior Authorization suite of HIPAA standardized transactions, we do NOT count it in the Prior Authorization category above.	2015
Employer/HIX/Broker Enrollment/ Disenrollment	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.	2015
Employer/HIX/Broker Premium Payment/ Explanation	ASC X12N 820 005010X218 (employer) 005010X306 (HIX)	The HIPAA standard electronic premium payment transaction 820 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.	2015

† Both HIPAA standards and operating rules are federally mandated.

Tracking the impact of these regulations and industry initiatives that promote adoption is critical to monitoring progress and identifying specific opportunities for further improvement. The CAQH Index,

formerly known as the U.S. Healthcare Efficiency Index, was transitioned to CAQH in 2011. Today it is the only industry source tracking the industry-wide transition to "full adoption" of electronic transactions, including adoption by both health plans and healthcare providers. Since its inception, the Index has monitored the annual progress of the commercial healthcare industry toward full adoption of electronic transactions and the estimated potential for additional cost savings.

To obtain this information, CAQH conducted voluntary nationwide surveys of commercial medical and dental health plans and providers. Separate data collection instruments were developed for plans and providers to report membership information, products offered, volume, methods used for the most recognized administrative transactions (transactions shown in Table 1), and the direct costs associated with each method. See Appendix A for additional details on methodology.

BASIC CHARACTERISTICS OF DATA

Medical

The basic characteristics of participating health plans are shown in Table 2. Medical health plans contributing to the CAQH Index for calendar year 2014 represented 118.2 million covered lives, an increase of over 14 million lives since the Index data collection effort for calendar year 2012. This represents approximately 44.5 percent of U.S. commercially insured covered lives, based on enrollment reported in the AIS Directory of Health Plans. The majority of these health plans' members were enrolled in commercial products, which include varying types of group and individual plans. There was a notable increase in the proportion of Medicaid and State Children's Health Insurance Plan (SCHIP) enrollment, likely associated with ACA Medicaid expansion. About half of the plans were not-for-profit, and 44 percent provided coverage nationally. Similarly, there was an increase in the overall volume of claims and other transactions. In 2014, 1.42 billion claims were submitted, and the total volume of all transactions continued to increase to 4.3 billion.

Table 2: Basic Characteristics of CAQH Index Contributing Health Plans, 2012 -2014

Characteristic	Medical			Dental
	2012	2013	2014	2014
Enrollment				
Members (total in millions)	104.0	112.0	118.2	92.8
Commercial (%)	87.2	87.2	84.0	77.5
Medicaid/SCHIP (%)	6.2	8.0	9.2	19.1
Medicare Advantage/FFS (%)	5.7	4.8	4.6	
Other Products (%)	0.9	0.0	2.1	3.5
Proportion of Total Commercial Enrollment (%)	40.6	41.7	44.5	43.7
Ownership		55.5		50
Not-for-profit (%)				
Geography		44.4		100
Nationwide Insurer (%)				
Number of Claims Received (total in millions)	1,248	1,409	1,424	158
Number of Transactions (total in millions)	3,243	3,910	4,288	439

Source: CAQH Index 2013, 2014, and 2015, AIS Directory of Health Plans Data 2013, 2014, 2015[10], NADP Dental Plan Profiles[11]

[10] Atlantic Information Services. Directory of Health Plans: 2013-2015. Washington, DC: Atlantic Information Services; 2013-2015
[11] National Association of Dental Plans Dental Plan Profiles, 2015.

Dental

The participating dental health plans represented over 92 million covered lives in 2014, approximately 43.7 percent of the U.S. population with commerical dental insurance based on total commercial enrollment reported in the National Association of Dental Plans (NADP) 2015 Dental Plan Profiles. Similar to medical, most of the participating dental health plans' members were enrolled in commercial products. All of the contributing health plans were nationwide plans, and half were not-for-profits. Data were aggregated for four transactions for the dental industry: claim submission, eligibility and benefit verification, claim status inquiry, and claim payment, representing over 439 million transactions.

Volume Benchmarks

Medical

The total volume of each transaction is shown in Table 3. These estimates support industry benchmarking of the volume of transactions per member and per claim and are relatively stable compared to 2013. There were approximately 36 transactions conducted per member in 2014, similar to previous years. There were 12 claims submitted per member. The majority of transactions were eligibility and benefit verifications, with nearly 17 of these transactions occurring per member, an increase from 15.2 per member in 2013.[12] The higher number of eligibility verifications per member and per claim could be related to verifications completed for claims that were not submitted in the data year, an effect that is likely balanced by claims for which the corresponding eligibility verification occurred in the prior year. This may also be related to other business practices, such as routine checks of patient eligibility, explored further in the Eligibility and Benefit Verification section.

Dental

Participating dental plans reported 4.7 transactions per member annually, with about two claim submissions and eligibility and benefit verifications per member. Different from the medical health plans, the ratio of claims submitted to eligibility and benefit verifications was inverse for dental, with more claims submitted than eligibility inquiries.

Table 3: Annual volume of Administrative Transactions Reported by Health Plans, by enrollment and claim volume, 2014

	Number of Transactions (in millions)	Number of Transactions per member	Number of Transactions per claim submitted
Medical	4,288.3	36.2	--
Claim Submission	1,424.2	12.1	--
Eligibility/Benefit Verification	1,786.8	16.9	1.4
Prior Authorization	22.1	0.2	0.02
Claim Status Inquiry	371.0	3.7	0.3
Claim Payment	227.4	2.0	0.2
Remittance Advice	208.3	2.1	0.2
Claim Attachments	60.3	0.6	0.1
COB Claims	12.6	0.3	0.03
Referral Certification	8.2	0.3	0.02
Dental	439.1	4.7	--
Claim Submission	158.6	1.7	--
Eligibility/Benefit Verification	134.6	1.7	0.9
Claim Status Inquiry	17.3	0.1	0.1
Claim Payment	128.6	1.4	0.8

Source: CAQH Index 2015

[12] 2014 CAQH Index Report

ADOPTION OF ELECTRONIC TRANSACTIONS: MEDICAL HEALTH PLANS

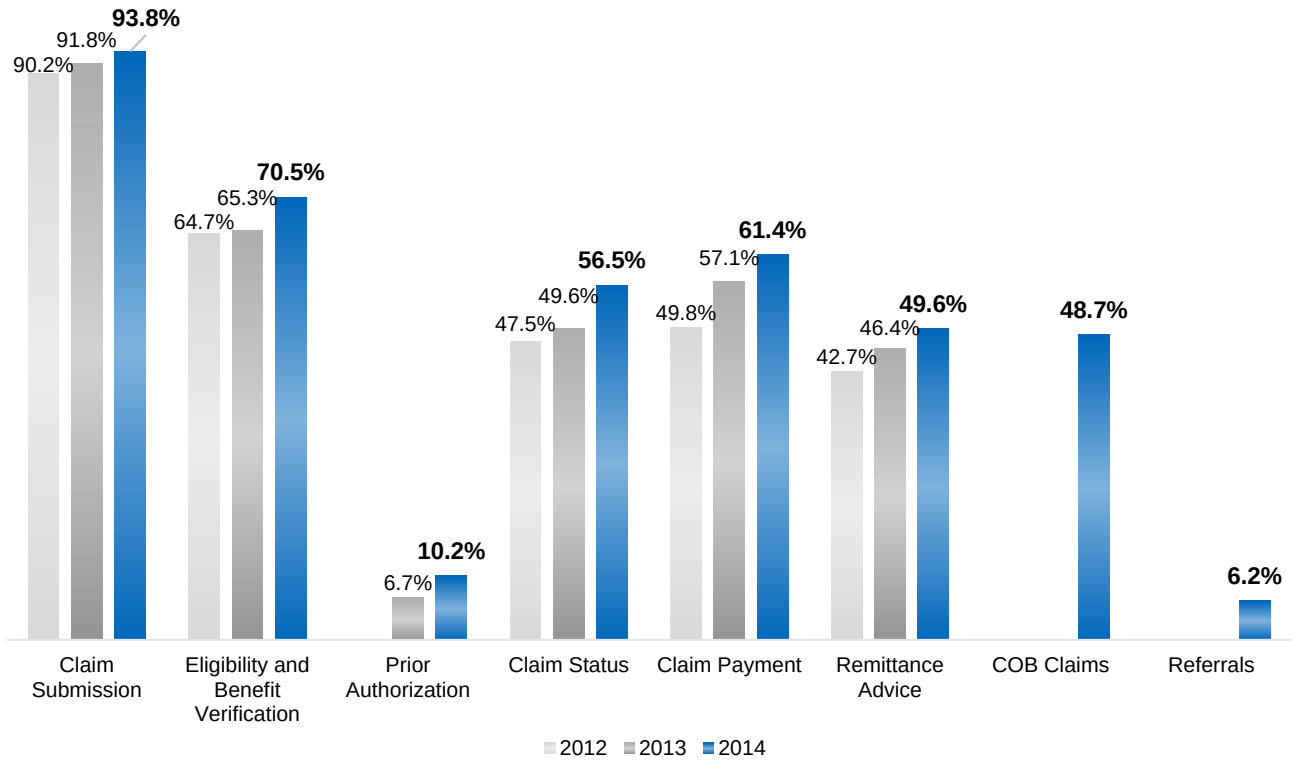
Overview

Figure 1 shows the overall adoption of fully electronic transactions for each transaction type studied in 2014. Generally, the adoption has continued to increase over the three-year period. Claim submission (93.8%) continues to show the highest adoption for fully electronic transactions. Prior authorization (10.2%) and referral certification (6.2%), which utilize the same HIPAA standard, have the lowest levels of adoption. The greatest increase in adoption observed in the three years studied by the CAQH Index has been for electronic claim payment, which has grown by over 11 percentage points since 2012.

Of note, these adoption rates are pooled across all responding health plans. There is considerable variation in adoption between responding health plans. For example, the lowest variation in adoption between responding health plans is for claim submission (88.4% to 96.7%), while variation in adoption of prior authorization is extremely high (0.1% to 80.0%).

The following sections provide further detail on adoption of each of the transactions. They report the proportion of transactions conducted by method – fully electronic, partially electronic, and fully manual. Fully electronic transactions follow HIPAA standards as described in Table 1. Partially electronic transactions leverage technologies, such as web portals and IVR systems, providing an intermediate solution that requires manual effort by the healthcare provider. Fully manual transactions include those conducted by telephone, fax, and mail, requiring manual effort by the healthcare provider and health plan.

Figure 1: Overall Adoption of Fully Electronic Transactions for Commercial Health Plans, 2012 - 2014



Source: CAQH Index® 2013, 2014, and 2015

Claim Submission

Adoption rose modestly for the most widely used fully electronic transaction.

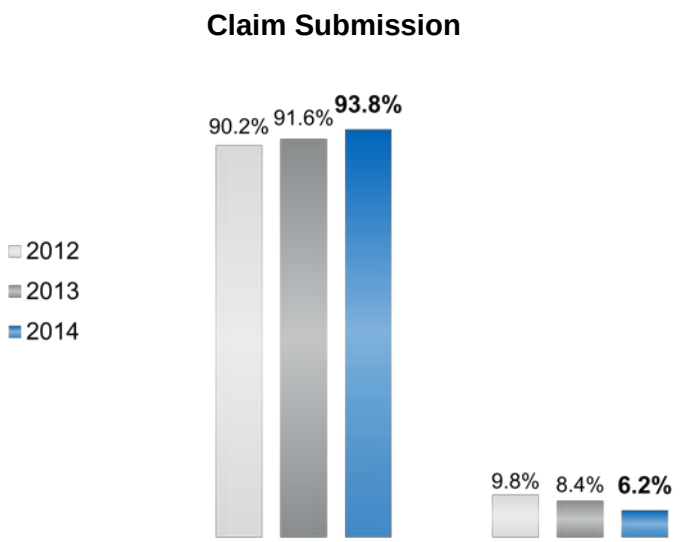
As previously noted, claim submission had the highest overall adoption rate among the electronic transactions studied, and in 2014 a modest increase (+2.2 percentage points) pushed adoption even higher. (Figure 2) The majority of claims are still submitted from non-facility providers, with comparable adoption of electronic claim submission between facility and non-facility providers.

Health plans reporting the highest adoption of electronic claim submission indicated deliberate organizational efforts to drive adoption, including financial incentives for targeted high-volume providers and health plan-imposed requirements for electronic submission.

The most recent estimates from the Centers for Medicare and Medicaid Services (CMS) reported 99.8 percent adoption for Medicare fee-for-service (FFS) Part A/B electronic claim submissions. This near-full adoption for Medicare FFS is related to CMS' mandatory requirement[13] for electronic claim submission.

See Dental Health Adoption for a discussion of comparable adoption by the dental industry.

Figure 2: Health Plan Volume (in millions) and Adoption by Modality, Claim Submission, 2012 - 2014



	Fully Electronic (ASC X12N 837)	Fully Manual
2012	90.2% (1,126)	9.8% (122)
% Point Change 2012-2013	▲1.4%	▼1.4%
2013	91.6% (1,291)	8.4% (118)
% Point Change 2013-2014	▲2.2%	▼2.2%
2014	93.8% (1,336)	6.2%(88)

Source: CAQH Index® 2013, 2014, and 2015

[13] Administrative Simplification Compliance Act (ASCA), Pub.L. 107-105, and the implementing regulation 42 CFR 424.32

Medical Claim Attachments

Claim attachments are supplemental documents providing the health plan with additional medical information that cannot be accommodated within the claim format. Common attachments are Certificates of Medical Necessity (CMNs), discharge summaries, and operative reports. They are sent to the carrier/intermediary with the original claim or in response to a request from a carrier/intermediary. Standards and operating rules for claim attachments, including attachments for initial claim submission, COB claims, and claim appeal-related documentation are not yet federally mandated. A number of standards are used for attachments, including the ASC X12 and HL7 CCD standards.

Four contributing health plans, representing nearly 101.3 million members, reported volume of claim attachments. Similar to 2013, three of the four plans indicated receiving 100 percent of claim attachments manually. This year a single plan reported receiving some fully electronic claim attachments using the ASC X12 standard. Aggregate adoption will be reported in future years, as more plans are able to report.

Coordination of Benefits (COB) Claims

Nearly half of the 12.6 million Coordination of Benefits (COB) claims reported by responding health plans for 2014 were submitted electronically using the HIPAA standard.

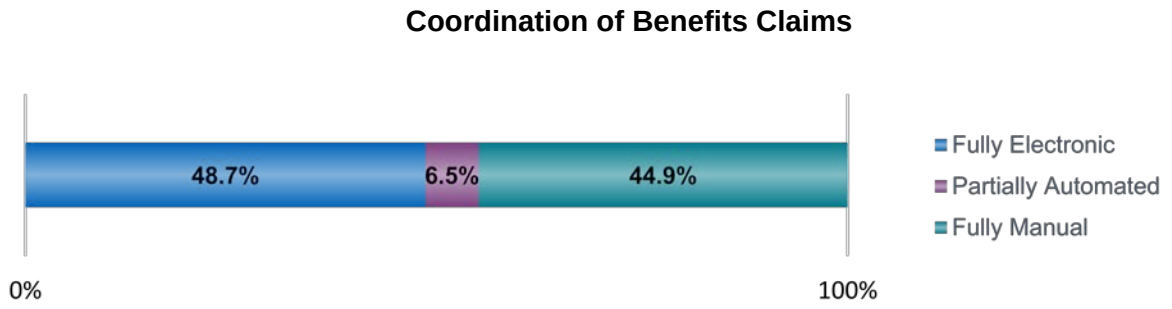
The 2015 data collection solicited data from contributors on COB claims for the first time. Only a subset of plans reported this year, with several others anticipating the ability to report in the future.

Fewer than half (49%) of COB claims were submitted electronically. There are several possible factors contributing to this low level of adoption:

- COB claims are often submitted from health plan to health plan, or directly from the member to the health plan, which requires electronic claim submission capabilities to be set up between payers and with members. Web portals may provide alternatives to fully manual claim submission for other plans and members, and as suggested by the data, are being used in some instances.
- There is often a time lag for plans to detect when members have multiple coverages, further delaying determination of primary payer. This delay likely results in the need for health plans to adjust claims that have already been adjudicated and/or paid, which may not be feasible through electronic claim submission.

Increased collaboration among health plans, and use of innovative solutions to detect and coordinate these claims sooner, should further streamline this complex process.

Figure 3: New 2015 Transaction – Health Plan Volume (in millions) and Adoption by Modality, COB Claims, 2014



Fully Electronic (ASC X12N 837)	**Partially Electronic** (Web Portal, IVR)	**Fully Manual** (Telephone, Fax, Mail)	**Fully + Partially Electronic** (HIPAA, Web Portal, IVR)
48.7% (6.1)	6.5% (0.8)	44.9% (5.7)	55.2% (6.9)

Source: CAQH Index® 2015

Eligibility and Benefit Verification

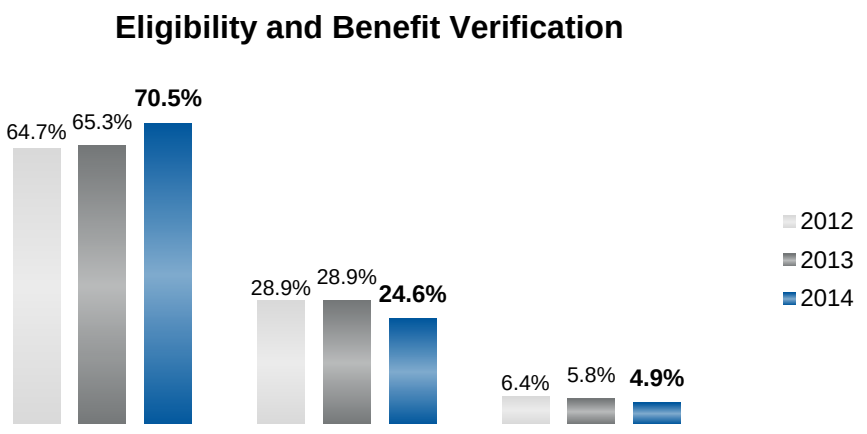
Utilization of fully electronic eligibility and benefit verification increased by 5.2 percentage points, the second highest increase among all transactions.

Adoption of fully electronic eligibility and benefit verifications rose considerably, by 5 percentage points, with a decline in use of web portals, IVR systems, and fully manual transactions. Of note, these declines in partially electronic and fully manual transactions correspond to very small reductions in volume of transactions using these methods.

The improvements observed in adoption of fully electronic eligibility and benefit verification may be influenced by the ACA-mandated operating rules for the HIPAA standard, which went into effect in January 2013. One of the key requirements of the operating rules is real-time access to patient eligibility and benefit information. Real-time access to details about patient financial liability gives the healthcare provider greater confidence that the reimbursement will be received, reduces the need for collections, and allows the patient to accurately plan for the cost of care. Real-time information also improves productivity by providing information more quickly than telephonic inquiries.

In 2014, the second year following the deadline to implement the operating rules, improvements in adoption levels were more significant than in 2013, suggesting that it may take more than one year of implementation from the effective date of a mandate to observe significant impact.

Figure 4: Health Plan Volume (in millions) and Adoption by Modality, Eligibility and Benefit Verification, 2012-2014



	Fully Electronic (ASC X12N 270/271) % (Volume in millions)	**Partially Electronic** (Web Portal, IVR) % (Volume in millions)	**Fully Manual** (Telephone, Fax) % (Volume in millions)	**Fully + Partially Electronic** (HIPAA, Web Portal, IVR) % (Volume in millions)
2012	64.7% (789)	28.9% (352)	6.4% (79)	93.6% (1,140)
% Point Change 2012-2013	▲0.6%	No Change	▼0.6%	▲0.6%
2013	65.3% (1,000)	28.9% (443)	5.8% (88)	94.2% (1,443)
% Point Change 2013-2014	▲5.2%	▼4.3%	▼0.9%	▲0.9%
2014	70.5% (1,260)	24.6% (440)	4.9% (87)	95.1% (1,700)

Source: CAQH Index® 2013, 2014, and 2015

Additionally, the release of the mandate and communications leading up to its implementation likely increased awareness of the advantages for both health plans and providers.

The substantial overall increase in the volume of eligibility and benefit verifications in 2014 is likely influenced by several other factors:

- The ACA health insurance exchanges introduced many new coverage options to the market. In addition to increased overall enrollment, there was a particular increase in enrollment in high-deductible health plans, which may increase healthcare providers' need to inquire about patients' coverage and financial liability.
- Some vendors now offer the capability to routinely check patient eligibility across a provider's full patient roster, whether or not the patient is receiving care.
- Some non-provider entities use eligibility and benefit verification transactions for coordination of benefits and other services for providers; for example, state Medicaid plans and third-party benefit verification services.

These findings demonstrate that, while use of fully electronic transactions continues to increase, progress to realizing the maximal cost savings is limited by continued use of manual processes. In 2014, participating health plans fielded over 87 million telephone calls from healthcare providers related to eligibility and benefits. Ongoing operation of call centers to respond to this volume requires substantial health plan resources. These telephone calls also consume staff time in the provider's office, where the time could be applied to activities that deliver greater value. Further reduction in the total volume of telephonic inquiries is essential to maximize cost savings to the healthcare system.

See Dental Health Adoption for a discussion of comparable adoption by the dental industry.

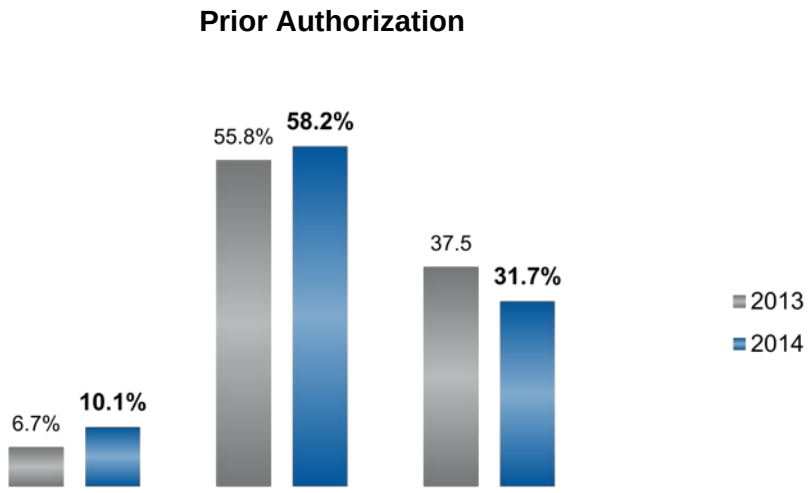
Prior Authorization & Referral

Web portals are the predominant method for submission and approval of prior authorizations (58.2%) and referrals (82.1%).

In 2014, the adoption of fully electronic prior authorization increased, yet web portal and IVR systems continued to be the most common method of completing a prior authorization. The volume of manual prior authorizations declined by almost 1 million from 2013 to 2014.

Many health plans require documentation to support prior authorizations, which necessitates attachments similar to claim attachments. To date, the Index has insufficient data from contributors to provide detailed estimates of adoption. Anecdotally, participating health plans reported approximately half of these documents were submitted via portals, and the other half were submitted manually (predominantly via fax). Given the apparent lack of adoption by health plans of fully electronic transactions to support submission of prior authorization attachments, healthcare providers may currently have no alternative to web portals and manual processes as a means of submitting prior authorizations requiring supporting documentation.

Figure 5: Health Plan Volume (in millions) and Adoption by Modality, Prior Authorization, 2013-2014



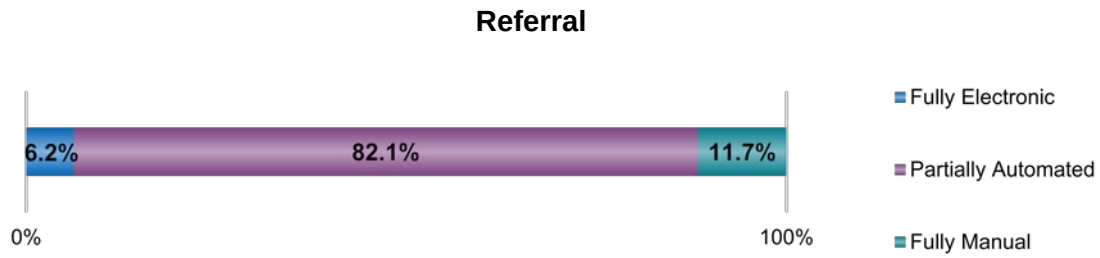
	Fully Electronic (ASC X12N 278)	Partially Electronic (Web Portal, IVR)	Fully Manual (Telephone, Fax, eMail)	Fully + Partially Electronic (HIPAA, Web Portal, IVR)
2013	6.7% (1.4)	55.8% (11.8)	37.5% (7.9)	62.8% (13.2)
% Point Change 2013-2014	▲3.4%	▲2.4%	▼5.8%	▲5.8%
2014	10.1% (2.2)	58.2% (12.8)	31.7% (7.0)	68.3% (15.1)

Source: CAQH Index® 2014, and 2015

Referral

A referral is a common transaction used by healthcare providers to obtain authorization from a health plan before referring a member to another healthcare provider. Referral is one of several business processes, including prior authorization, that use a common HIPAA standard. Data on referrals were collected from a subset of health plans for the first time for this report. Similar to adoption of fully electronic prior authorization, adoption of the fully electronic transaction was low in 2014. The majority of referrals were conducted using partially electronic methods.

Figure 6: New 2015 Transaction – Health Plan Volume (in millions) and Adoption by Modality, Referral Certification, 2014



Fully Electronic (ASC X12N 278)	**Partially Electronic** (Web Portal, IVR)	**Fully Manual** (Telephone, Fax, eMail)	**Fully + Partially Electronic** (HIPAA, Web Portal, IVR)
6.2% (0.5)	82.1% (6.8)	11.7% (1.0)	88.3% (7.3)

Source: CAQH Index® 2015

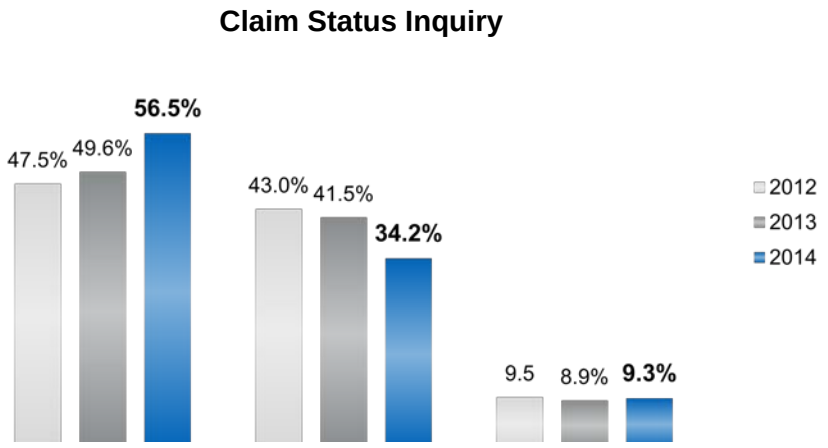
Claim Status Inquiry

While adoption of fully electronic claim status inquiry transactions grew more than for any other transaction studied in 2014 (+6.9 percentage points), the volume of telephonic inquiries remains high.

Claim status inquiry achieved the highest increase in adoption of fully electronic transactions in 2014, increasing by nearly 7 percentage points. This increase corresponded to a decline in web portal/IVR transactions. The proportion of manual claim status inquiries increased slightly to 9.3 percent, an increase of nearly 7 million inquiries. It is possible the increase in volume of manual inquiries is directly correlated to the increase in volume of claim submissions across the years, or it may indicate the level of telephonic inquiries is not reducing.

Several factors may influence the improvements observed in adoption of fully electronic claim status inquiry. In previous years, several plans reported continually expanding efforts to streamline claim status inquiries. Also, in January 2013, ACA-mandated use of operating rules to support the HIPAA standard for claim status inquiries became effective. The operating rules for claim status inquiries also require real-time access to claim status information, which offers unique incentives for providers to access claim status and rapidly respond to health plan requests for additional information needed to process payment. The advantages of real-time access, in addition to increased industry awareness, are likely associated with increasing use of the fully electronic transaction. Similar to eligibility and benefit verifications, it appears that, while a modest transition was observed after the first year of

Figure 7: Health Plan Volume (in millions) and Adoption by Modality, Claim Status Inquiry, 2012-2014



	Fully Electronic (ASC X12N 276/277)	Partially Electronic (Web Portal, IVR)	Fully Manual (Telephone)	Fully + Partially Electronic (HIPAA, Web Portal, IVR)
2012	47.5% (123.7)	43.0% (111.9)	9.5% (24.7)	90.5% (235.6)
% Point Change 2012-2013	▲2.1%	▼1.5%	▼0.6%	▲0.1%
2013	49.6% (155.6)	41.5% (130.2)	8.9% (27.9)	91.1% (285.7)
% Point Change 2013-2014	▲6.9%	▼7.3%	▲0.4%	▼0.4%
2014	56.5% (209.5)	34.2% (127.0)	9.3% (34.5)	90.7% (336.4)

Source: CAQH Index® 2013, 2014, and 2015

implementation, the second year of implementation allowed for greater compliance and more impact to be observed.

As with eligibility and benefits verification, some vendors are offering the capability to routinely check the status of claims until payment has been made, which may also be driving the volume of fully electronic transactions. Duplicate inquiries per claim are not distinguishable in the data collected by the Index.

See Dental Health Adoption for a discussion of comparable adoption by the dental industry.

Claim Payment

Electronic funds transfer (EFT) adoption increased to 61.4 percent in 2014 (+4.3 percentage points), a slower increase than in the prior year (+7.3 percentage points).

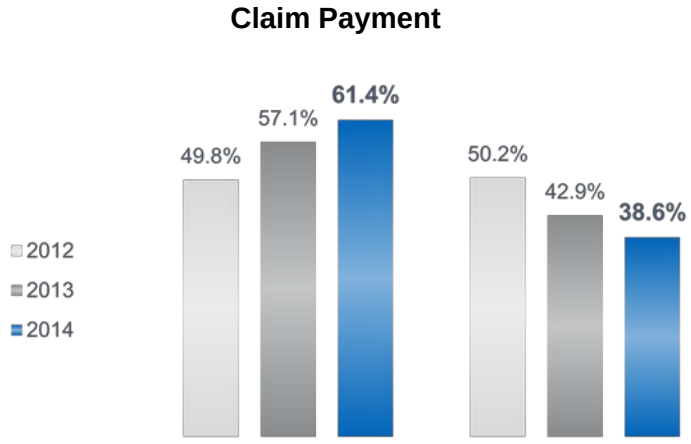
EFT adoption continued to increase in 2014, with a comparable decline in paper checks. While adoption of EFT outpaced the growth rate of all other electronic transactions between 2012 and 2014 (+11.6 percentage points), more accelerated adoption may have been anticipated given that the ACA-mandated transaction standard and operating rules became effective during this time. Also in 2013, CMS began requiring all healthcare providers to enroll in EFT to receive payments electronically.

In addition to these government actions, industry-wide awareness of the value of EFT has grown, given industry initiatives to streamline processes for healthcare providers to enroll in EFT. However, much of this activity occurred in 2014, and it may take longer than one year from implementation of industry and government initiatives to experience a rapid acceleration in adoption.

This year the CAQH Index began exploring the use of emerging claim payment methods, such as virtual payments and third-party payment vendors. When paying via virtual payments, commonly known as "virtual cards," health plans send credit card payment information and instructions to providers, who then process payments using standard credit card technology. Some health plans are also using third-party payment vendors to originate EFT payments to providers, which add an additional connection and possibly cost. Reporting of adoption and costs of these emerging claim payment methods is expected in future reports.

See Dental Health Adoption for a discussion of comparable adoption by the dental industry.

Figure 8: Health Plan Volume (in millions) and Adoption by Modality, Claim Payment, 2012-2014



	Fully Electronic (NACHA)	Fully Manual (Mail)
2012	49.8% (111.4)	50.2% (112.3)
% Point Change 2013-2014	▲7.3%	▼7.3%
2013	57.1% (129.9)	42.9% (97.6)
% Point Change 2014-2015	▲4.3%	▼4.3%
2014	61.4% (139.6)	38.6% (87.8)

Source: CAQH Index® 2013, 2014, and 2015

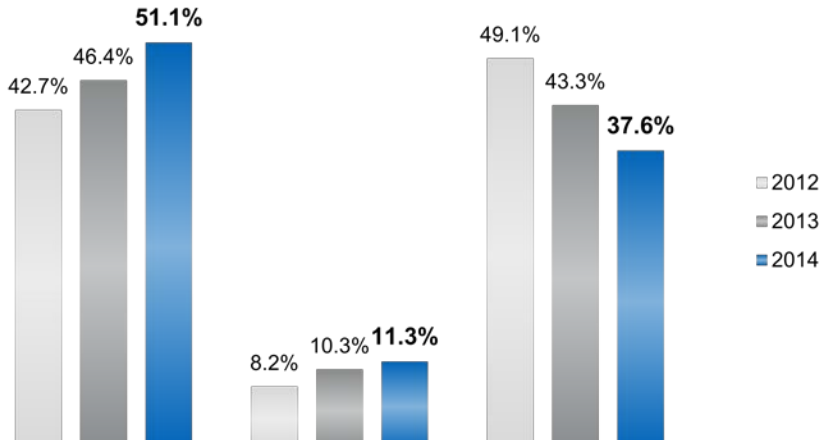
Remittance Advice

Adoption of fully electronic remittance advice (ERA) transactions continued to increase at a steady pace in 2014, yet more than a third of these transactions remained fully manual.

Over half of all remittance advice transactions were fully electronic in 2014, representing a 4.7 percentage-point increase. In addition, there was a slight increase in partially electronic (e.g., web portals/IVR systems) transactions, up to 11 percent of all remittance advice notices. Approximately 38 percent of remittance advice notices were still being sent via mail. This high volume represents a huge opportunity for industry savings.

Along with claim payment, the ACA-mandated operating rules for ERA were effective in January 2014. These rules addressed several complexities involved in the remittance process, including providing uniform specifications for Claim Adjustment Reason Codes (CARCs) and Remittance Advice Remark Codes (RARCs) code combinations, and re-association of ERA with EFT. Healthcare providers have reported that the uniform CARC and RARC code combinations reduce time to payment and improve the ability to interpret ERAs. However, time and coordination with vendors is necessary to integrate these changes into PMSs and to realize these benefits.

Figure 9: Health Plan Volume (in millions) and Adoption by Modality, Remittance Advice, 2012-2014



	Fully Electronic (ASC X12N 835)	Partially Electronic (Web Portal, IVR)	Fully Manual (Fax, Mail)	Fully + Partially Electronic (HIPAA, Web Portal, IVR)
2013	42.7% (79.7)	8.2% (15.2)	49.1% (91.7)	50.9% (94.9)
% Point Change 2013-2014	▲3.7%	▲2.1%	▼5.8%	▲5.8%
2014	46.4% (91.8)	10.3% (20.4)	43.3% (85.7)	56.7% (112.2)
% Point Change 2014-2015	▲4.7%	▲1.0%	▼5.7%	▲5.7%
2015	51.1% (106.4)	11.3% (23.5)	37.6% (78.3)	62.4% (130.0)

Source: CAQH Index® 2013, 2014, and 2015

Lack of rapid growth in adoption of ERA in 2014 may be consistent with adoption patterns observed for other transactions in the first year of federal mandates and industry initiatives. As these data represent the same year these regulations were effective, more substantial growth may be observed in the second year.

Enrollment / Disenrollment and Premium Payment

The 2015 CAQH Index data collection effort included two new transactions – enrollment/disenrollment and employer health plan premium payment.

Enrollment/disenrollment includes the electronic exchange of enrollment lists, or modifications to these lists, between health plan sponsors, health plan administrators, brokers, or health insurance exchanges and health plans. The enrollment/disenrollment transaction can encompass a periodic full update of a health plan sponsor's health plan enrollees, or it can reflect a change to an existing enrollment dataset, with modification instructions for particular enrollees.

The premium payment transaction can be used by health plan sponsors, health plan administrators, brokers, or health insurance exchanges to initiate a transfer of funds to pay health insurance premiums and to communicate with health plans about the details of the payment, which is analogous to remittance advice. There are HIPAA-mandated standards for both of these transactions, but operating rules have not been mandated.

For this first data collection year, important lessons were learned regarding what is involved in the tracking of these transactions. An insufficient number of health plans was able to report either of these transactions to enable detailed reporting. Data from some health plans suggest that the HIPAA standards for these electronic transactions are being used – and at high levels in some cases. Other health plans reported use of other solutions (e.g., web portals) to support these transactions.

For health plans that were unable to report adoption of these transactions this year, there were two notable barriers:

- Transactions are primarily handled by health plan agents (e.g., third-party administrators/clearinghouses), and reporting functions need to be established.
- Transactions are handled by another unit within the organization, other than the Index contact, and coordination of data would have required more time.

Addressing these key data collection challenges will be a priority in 2016 CAQH Index data collection.

ADOPTION OF ELECTRONIC TRANSACTIONS: DENTAL HEALTH PLANS

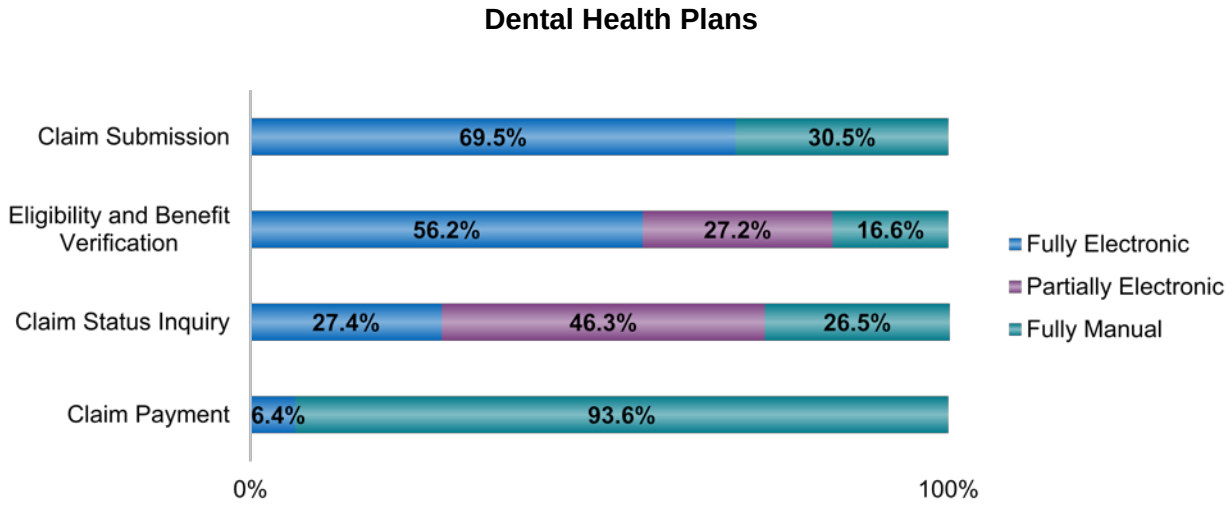
Adoption of fully electronic transactions by dental health plans was, on average, 30 percentage points lower than adoption levels by medical health plans. The transaction with the highest level of adoption was claim submission, with nearly 70 percent submitted electronically in 2014.

For the first time, the CAQH Index is reporting the adoption of fully electronic transactions for the dental industry. Dental health plans and providers are HIPAA-covered entities, yet their adoption of fully electronic transactions has significantly lagged behind their counterparts in the medical sector. This gap in adoption highlights the need for targeted, coordinated industry initiatives to accelerate adoption in this sector.

In 2014, dental industry adoption of fully electronic transactions ranged from nearly 17 percentage points lower than the medical sector, for electronic eligibility and benefit verification, to 55 percentage points lower, for claim payment. While claim submission had the highest adoption rate, 30 percent of claims were submitted using paper-based methods, compared to only 6 percent for medical claims. Similarly, dental health plans are currently paying most claims using paper checks (93.6%).

Just over half of dental eligibility and benefit verification transactions (56.2%) were conducted electronically in 2014 using the HIPAA standardized electronic transaction, and a significant share was conducted via web portals and IVR systems (27.2%). A notably larger share of claim status inquiry transactions was conducted using web portals and IVR systems (46.3%) compared to medical (34.2%).

Figure 10: Volume (in millions) and Adoption by Method for Commercial Dental Health Plans, 2012-2014



	Fully Electronic (HIPAA Standard)	**Partially Electronic** (Web Portal, IVR)	**Fully Manual** (Fax, Mail)	**Fully + Partially Electronic** (HIPAA, Web Portal, IVR)
Claim Submission	69.5% (110.2)	0% (0)	30.5% (48.3)	69.5% (110.2)
Eligibility and Benefit Verification	56.2% (75.6)	27.2% (36.6)	16.6% (22.4)	77.6% (112.2)
Claim Status Inquiry	27.4% (4.7)	46.3% (8.0)	26.5% (4.6)	73.5% (12.7)
Claim Payment	6.4% (8.2)	0% (0)	93.6% (120.3)	6.4% (8.2)

Source: CAQH Index® 2015

The higher adoption of fully electronic transactions for claim submission and eligibility and benefit verification, compared to claim status inquiry and EFT, demonstrates the availability of dental PMSs that can support fully electronic transactions using HIPAA standards. Integrating all HIPAA standards, transactions, and operating rules into the workflow of these systems, as well as voluntary election by dental providers to implement these systems, would further drive adoption.

While the volume of business transactions per member is lower for dental health plans, compared to medical health plans, a huge potential cost-saving opportunity remains by transitioning to electronic processes for the nearly 200 million costly manual transactions reported by participating health plans in 2014. Similarly, it has been reported that adoption of electronic clinical processes (e.g., electronic health records) by dental health providers is low [14] – and possibly further behind than that of the medical health industry.

[14] Schleyer, T., Song, M., Gilbert, G. H., Rindal, D. B., Fellows, J. L., Gordan, V. V., & Funkhouser, E. (2013). Electronic dental record use and clinical information management patterns among practitioner-investigators in The Dental Practice-Based Research Network. *The Journal of the American Dental Association*, *144*(1), 49-58.

COST OF ADMINSTRATIVE TRANSACTIONS

Cost per Transaction

Table 4 shows the estimated cost of each transaction, by type (manual[15] vs. electronic[16]), and reports the per-transaction savings opportunity for health plans, healthcare providers, and the industry combined. Cost per transaction estimates for health plans are very similar to previous reports. These cost-per-transaction estimates for healthcare providers are based on the combined responses from the 2014 and 2015 surveys to increase the precision of the cost estimates using a larger sample of providers. See Appendix A – Detailed Methodology for additional information. The notable differences in the cost-per-transaction estimates for healthcare providers compared to previous years are an increased cost savings for electronic eligibility and benefit verifications and a decreased cost savings for claim submission, EFT, and ERA. However, these differences do not reflect a true trend in cost over the years, but result from variation due to the small sample of providers included in the estimates. The 2015 survey respondents add a broader range of small healthcare providers and specialties.

The cost to conduct transactions manually was consistently higher than the cost of electronic transactions. This was true across all transactions for health plans and healthcare providers. The greatest per-transaction potential saving opportunities for health plans are for eligibility ($4.25 per transaction) and claim status ($4.31 per transaction) inquiries. These transactions often require human-to-human telephone interaction when conducted manually. The ongoing use of telephone calls requires health plans to maintain costly call center operations and requires a disproportionately large commitment of resources by the healthcare provider, ultimately contributing to the high cost differential.

Table 4: Average Cost per Transaction and Savings Opportunity for Commercial Health Plans and Providers for Electronic and Manual Transactions, 2014

Transaction	Method	Health Plan Cost	Provider Cost	Industry Cost	Health Plan Savings Opportunity	Provider Savings Opportunity	Industry Savings Opportunity
Claim Submission/ Receipt	Manual	$0.62	$1.36	$1.98	$0.52	$1.01	$1.53
	Electronic	$0.09	$0.35	$0.44			
Eligibility and Benefit Verification	Manual	$4.32	$4.80	$9.12	$4.25	$3.93	$8.18
	Electronic	$0.07	$0.87	$0.94			
Prior Authorization	Manual	$3.66	$7.17	$10.83	$3.62	$4.70	$8.32
	Electronic	$0.04	$2.47	$2.51			
Claim Status Inquiry	Manual	$4.35	$2.85	$7.20	$4.31	$1.95	$6.26
	Electronic	$0.04	$0.99	$0.94			
Claim Payment	Manual	$0.57	$1.52	$2.09	$0.48	$0.56	$1.04
	Electronic	$0.09	$0.96	$1.05			
Claim Remittance Advice	Manual	$0.50	$3.52	$4.02	$0.45	$1.11	$1.56
	Electronic	$0.05	$2.41	$2.46			

Source: CAQH Index 2015

[15] For health plans, these include all transactions conducted using either the HIPAA standardized transaction, comparable electronic data interchange technology, web portal, or IVR (e.g., fully electronic and partially electronic from above). For healthcare providers, these include only those transactions conducted using the adopted HIPAA standard, as web portal and IVR transactions require full human effort on the provider side of the transaction.

[16] For health plans, these include all transactions conducted via telephone, fax, or mail (e.g., fully manual from above). For healthcare providers these include the same with the addition of web portal and IVR transactions (e.g., partially electronic and fully manual from above).

Eligibility and benefit verications also have a large per-transaction savings opportunity for healthcare providers ($3.93 per transaction).The greatest per-transaction saving opportunity for healthcare providers was for prior authorizations ($4.31 per transaction); however, prior authorizations had the lowest overall volume of transactions among the six transactions.

National Estimates

National estimates of transaction volume and potential cost savings for the six initial transactions are presented in Table 5.

Commercial Health Plan Savings

An estimated 941 million manual and nearly 9 billion electronic transactions were conducted by U.S. commercial health plans in 2014. Adopting automated processes for just these six transactions could save health plans nearly $1.7 billion annually. The greatest savings opportunity for health plans is eligibility and benefit verification, which accounts for $931 million in potential cost savings.

Table 5: Estimated National Volume of Administrative Transactions and Savings Opportunity for Commercial Health Plans and Providers for Electronic and Manual Transactions, 2014

Transaction	Method	Health Plan National Volume (in millions)	Healthcare Provider National Volume (in millions)	Health Plan National Savings Opportunity (in millions $)	Healthcare Provider National Savings Opportunity (in millions $)	Industry National Savings Opportunity (in millions $)
Claim Submission/ Receipt	Manual	198	198	$104	$200	$304
	Electronic	3,002	3,002			
Eligibility and Benefit Verification	Manual	219	1,323	$931	$5,201	$6,132
	Electronic	4,270	3,165			
Prior Authorization	Manual	17	47	$60	$221	$281
	Electronic	36	5			
Claim Status Inquiry	Manual	90	421	$388	$821	$1,209
	Electronic	877	546			
Claim Payment	Manual	208	208	$100	$116	$217
	Electronic	330	330			
Claim Remittance Advice	Manual	209	272	$93	$302	$396
	Electronic	348	285			
Six-Transaction Total	Manual	**941**	**2,470**	**$1,677**	**$6,863**	**$8,540**
	Electronic	**8,862**	**7,334**			

Source: CAQH Index 2015

Healthcare Provider Savings

For the six transactions, an estimated 2.5 billion manual and 7.3 billion electronic transactions were conducted by healthcare providers in 2014. Adopting automated processes for just these six transactions could result in an estimated $6.8 billion savings for healthcare providers. Similar to health

plans, the greatest savings opportunity for healthcare providers is eligibility and benefit verifications, accounting for over $5 billion in potential cost savings.

Commercial Healthcare Industry Savings

While full adoption – meaning 100 percent use of electronic transactions – may not be achievable, if it were reached for just these six transactions, the commercial industry could save over $8.5 billion in administrative cost annually, accounting only for the direct costs included in these estimates. As noted above, eligibility and benefit verification represents the highest commercial industry potential cost savings from full adoption, representing over $6 billion in industry-wide potential cost savings. Beyond this estimate, transactions with public, non-commercial health plans are additional potentail cost savings.

FUTURE ENHANCEMENTS TO THE CAQH INDEX

The CAQH Index will continue to monitor industry progress toward adoption of fully electronic transactions and estimate the associated cost savings. CAQH, along with the CAQH Index Advisory Council, is committed to continually evolve the capacity and robustness of the Index. Each year, CAQH identifies new opportunities to expand and strengthen the Index data to inform and support the mission of accelerating the transformation of business processes in healthcare. Some specific future enhancements include:

Improving the Representation of Smaller Health Plans

Currently, the majority of Index health plan respondents are large national and medium-sized statewide plans that may be able to more readily invest in automation and integrate automated processes into already-centralized services. CAQH will target additional health plan data contributors, particularly smaller-sized regional health plans, to participate in future submissions.

Expanding the Set of Responding Healthcare Providers

While the data response from healthcare providers on the costs per transaction has grown and expanded to encompass additional types of providers (particularly smaller clinical practices), the number of respondents remains low. Therefore, the cost-per-transaction estimates are continually refined with ongoing efforts to engage a larger number of providers.

Adding Government Programs

While the Index includes data from commercially insured Medicare Advantage and managed Medicaid, it does not include data from the Medicare FFS program or Medicaid programs that are operated directly by the states. These programs require many of the same payer/provider inquiries and interactions;therefore, substantial additional savings for the industry could be available through automation that is not reflected in current estimates. The Index Advisory Council is working to include this additional Medicare and Medicaid data to provide more complete results for the entire covered U.S. population in future reports.

Improving the Precision of Savings and Cost Estimates

The potential savings estimates assume a one-to-one conversion of manual to electronic transactions. In reality, the availability of inexpensive, electronic transactions and market trends, such as increased use of high-deductible health plans,may sometimes lead to additional numbers of transactions – not an exact one-for-one replacement. Additionally, current cost estimates focus on direct labor costs as reported by healthcare providers and health plans. There are several indirect cost components that

may demonstrate further savings opportunities. Additional approaches to more precisely estimate the direct and indirect cost of administrative transactions for healthcare providers and health plans are being explored.

Further Understand the Impact of Alternative Payment Models on Adoption/Tracking

Current federal and industry initiatives to boost adoption of electronic transactions are primarily applicable for interactions between the health plan and health care provider in the traditional FFS payment environment. The U.S. healthcare payment system continues to evolve and innovate. As the industry adopts alternate payment models that require different types of information exchange and payment, transacting business is becoming more complex. There is growing activity in the area of value-based purchasing, which integrates quality and payment. Organizations using value-based payment models, such as accountable care organizations, have unique business needs as it relates to interactions between the healthcare provider and payer. Going forward, these will impact the use of business transactions currently tracked by the Index.

INDUSTRY CALL TO ACTION

The need to streamline the business of healthcare is universal and urgent: All stakeholders must align around the imperative to reduce cost and inefficiency. When healthcare administrative data is electronic, it simplifies business processes and real-time use of information. This in turn supports innovative applications of data analytics that can yield reduced costs, elevated quality and consistency of healthcare delivery, in order to provide an exceptional experience for healthcare consumers. The healthcare industry transition to electronic administrative transactions over manual processes is important to these goals.

The 2015 CAQH Index shows measurable progress in the transition to conduct routine business electronically, and spotlights remaining opportunities to reduce cost and improve efficiency. This report highlights that there is a role for all industry stakeholders to collectively and actively engage in substantive solutions to propel this transition forward. The following actions outline real opportunities to deliver on the promise envisioned decades ago by the enactment of HIPAA.

ACTION: Share and expand best practices to increase adoption of electronic transactions and reduce utilization of manual transactions among industry stakeholders by accelerating industry- and government-led outreach and education for health plans, healthcare providers, and their agents, including PMS vendors.

Given the variability in adoption among transactions and across health plans and healthcare providers, it is critical that entities share and adopt best practices to drive adoption. Central to this concept is monitoring progress and ongoing evaluation of the impact of initiatives to drive adoption to identify successful strategies to accelerate adoption.

Additionally, it is critical that industry and government entities collaborate to provide ongoing outreach and education for all HIPAA-covered and non-HIPAA-covered entities about the value of, and immediate need for, adoption of electronic transactions, reduction of manual processes, and compliance with standards and operating rules.

ACTION: Evaluate sufficiency of current government regulations and federal strategic plans to support broad adoption of fully electronic transactions for health plans, healthcare providers, and their agents.

Existing federal regulations require all HIPAA-covered entities to utilize adopted HIPAA requirements for electronic transactions. Only health plans and clearinghouses are currently federally mandated to offer electronic transactions, which includes the standards and any applicable operating rules. However, while healthcare providers are also required to use the HIPAA standards and comply with operating rules, they are not required to interact electronically with health plans. Beyond this uneven adoption approach, enforcement is also limited. Currently, enforcement for HIPAA covered entities is complaint-driven – requiring HHS to receive a complaint that an entity is non-compliant in order to initiate an investigation. Notably, the use and effectiveness of this enforcement mechanism remains unclear as no publicly available information indicates entities have been subject to compliance reviews or have been penalized through this system. While not yet instituted, the ACA legislation requires health plans to formally demonstrate compliance via certification. This will be the first proactive enforcement related to adoption of electronic transactions.The regulation includes significant penalties for health plans that are not compliant but does not apply to healthcare providers and clearinghouses. Non-HIPAA-covered entities, such as PMS vendors, are not under mandate to utilize HIPAA standards or comply with the established operating rules. Overall, it is not clear if this segmented regulation and limited enforcement can fully drive adoption and adherence.

While the Index is unable to attribute improvement in adoption directly to regulations rather than other industry initiatives, stakeholders should consider whether some level of adoption through government-imposed requirements should be applied to all stakeholders essential to adoption. Possible regulations might include: adoption mandates for entities beyond health plans and clearinghouses, a more robust enforcement approach focused on driving adoption for all types of entities, and the addition of operating rules for all HIPAA standards.

Efforts to transition to electronic transactions are driven and financed by individual health plans and healthcare providers, and initiatives to drive adoption often compete with other priorities for resources. In recent years, these have included ICD-10, electronic health records and meaningful use implementation, health information exchanges, and other mandates that have absorbed the same resources needed for systems to support electronic transactions. Similarly, there is a lack of strategic coordination among these initiatives, particularly as it relates to integrating the administrative and clinical uses of information technology (IT) in the healthcare system. Coordination is needed among federal agencies driving strategic plans for health IT, taking into account market resources required for clinical and administrative implementation.

ACTION: Increase targeted government- and industry-led efforts to reduce adoption barriers for health plans and healthcare providers, including consideration of financial incentives and contractual requirements.

Both health plans and healthcare providers have noted cost of initial implementation as a barrier to transitioning to fully electronic transactions. This report demonstrates the immense opportunity to reduce costs by adopting fully electronic transactions. Government and industry stakeholders should consider innovative investments, including how financial incentives could be applied, or how stakeholders could more actively conduct cost-benefit analyses to demonstrate the value of adoption. Notably, some payers, including CMS, have begun requiring adoption of certain transactions as part of contractual agreements with healthcare providers. Further application of this approach may be a useful strategy to rapidly drive adoption.

In addition to health plans and healthcare providers, vendors play a significant role in driving adoption, as the majority of the transactions flow, or are directly accessed by providers, through vendor systems and PMS products. Anecdotal evidence from the National Committee on Vital and Health Statistics, and others, suggests that some PMS vendors, which are not HIPAA-covered entities, increase the cost for

compliant systems or are not making data or infrastructure changes to systems on a timely basis. This lag in functionality and increased cost likely results in providers' slow adoption of electronic methods to interact with health plans. Vendors appear to delay development because they are not hearing the demand from provider users, who are unaware of the benefits and therefore do not request the new functionalities. It may also be the case that the updates require a contractual upgrade or increased resources by the provider or health plan.

Access to IT systems and software capable of consistently executing and updating fully electronic transactions is critical. Vendors should ensure their products offer integrated, regulation-compliant electronic transactions on a timely basis; certification of practice management systems can help with this transition. Health plans, providers, and their agents must also cite these requirements when contracting with the vendor community for products and services.

ACTION: Continue systematic review of business processes for potential improvements of technical and policy requirements that can improve efficiency and reduce cost.

Administrative simplification must be an ongoing improvement process. As such, industry stakeholders should embrace ongoing, proactive maintenance built into regulations, rather than wait for new mandates, and should establish a regular schedule for reviewing and updating, as necessary, current standards, codes, operating rules, and policies. This can accelerate the identificaton of opportunities to further increase efficiency or reduce cost.

ACTION: Improve uniform and systematic tracking and reporting of adoption – and related cost savings – by healthcare providers, health plans, and their agents.

Adoption and basic costs: Monitoring the transition to fully electronic transactions is essential to evaluating the impact of initiatives to drive adoption, report basic cost savings, and identify opportunities for further improvement. Several data limitations are highlighted in this report. Efforts should be made to implement and maintain routine and systematic data collection within health plans and provider organizations that can both monitor adoption of electronic transactions and accurately estimate cost savings. It is recognized that collecting high-quality data to track this transition can be a complex process that requires resources and a substantial amount of data, as well as an evolution of the approach based on lessons learned. However, this effort is critical to further understanding the impact of adoption and to overcoming the barriers.

Correlating adoption of electronic to reduction in manual processes: A key area for additional dialog and analysis is determining the impact on cost savings when the transition from manual to electronic is not a clear correlation – that is, the increasing volume of electronic transactions does not result in an equal reduction in manual transactions. At various periods in the transition to electronic for certain functions the industry may, for a time, or moving forward, use more electronic transactions than anticipated. The reasons, and thus the cost impact, are unclear at this point. For example, one reason volume of electronic eligibility and benefit verifications increased may be that healthcare providers are relying on the now-available real-time function more frequently, since an increasing number of patients has more-complex benefit structures requiring variable patient financial liability, such as high-deductible plans. If real-time electronic transactions with patient deductibles were not available, the manual volume may have grown significantly. In turn, the replacement of a paper check by an electronic payment does not have such variables to consider. Moving forward, CAQH and the Index Advisory Council intend to better classify fully electronic transactions so that the Index can more accurately estimate the one-to-one transition from manual to electronic transactions. Exploration of more granular data is needed to specifically correlate the increase in adoption with the reduction in manual

transactions so the industry can definitively measure the true cost savings associated with adoption. Similarly, better classification of the fully electronic transactions may enable the industry to better understand, and more definitively benchmark, volumes of transactions per member.

CAQH is fortunate to have the commitment of the contributing health plans and providers. Though the existing health plan contributors represent a large share of the commercial marketplace, expanding the size and scope of the dataset will allow for more precise tracking of progress toward full adoption. Ideally, all health plans and healthcare providers should have tracking mechanisms in place to readily extract and report this data.

ACKNOWLEDGEMENTS

The CAQH Index would like to acknowledge several individuals and organizations for their continued contributions to the success of this valuable industry data resource:

All contributing health plan and healthcare provider organizations and representatives for completing data submissions and follow-up interviews.

NORC at University of Chicago for supporting the expansion of provider recruitment efforts and synthesizing provider cost data.

Milliman, Inc. for providing analytical consultation to produce estimates and extrapolations.

CAQH Advisory Council (listed below) for continued support and guidance of the CAQH Index activities and reports.

Organization	2015 Advisory Council Member
Aetna	Jay Eisenstock
AHIP	Tom Meyers
Anthem	Katy Blomeke
BCBS of Michigan	John Bialowicz
Streamline Health, Inc. (Cooperative Exchange)	Richard Nelli
CAQH	Robin Thomashauer
CAQH	Gwendolyn Lohse
CAQH	Raynard Washington
Cigna	Paul Keyes
Florida Blue	Tab Harris
InstaMed	Bill Marvin
MGMA	Rob Tennant
Milliman, Inc.	Andrew Naugle
Nachimson Advisors, LLC	Stanley Nachimson
NORC at University of Chicago	Kennon Copeland
Premier Inc.	Erik Swanson
THINK-Health and Health Populi	Jane Sarasohn-Kahn
UnitedHealthcare	Diana Lisi

NOTE: The organizations listed here do not represent all data contributors. All health plan data contributors participate in the CAQH Index Advisory Council, but are not listed here to ensure data privacy.

Appendix A: DETAILED METHODOLOGY

Recruitment

Health plan and healthcare providers were recruited using a number of methods, including direct outreach (e.g., email/telephone), webinars, and other web postings. CAQH internally coordinated the recruitment of health plan data contributors and collaborated with the National Dental EDI Council (NDEDIC) for targeted outreach to dental health plans. CAQH partnered with Milliman, Inc in 2014 and NORC at University of Chicago (NORC) in 2015 to coordinate and manage provider data recruitment. Milliman, Inc. and NORC developed and implemented comprehensive plans to recruit a nationally representative pool of provider participants.

Data Collection

Adoption Rates

Adoption rates are estimated using only data submitted by commercial health plans. A detailed data submission guide was developed and distributed to potential health plan data contributors to ensure standardized definitions and collection of data elements. In addition, CAQH hosted and archived a series of webinars to provide guidance on completion of the data collections tools.

Health plan contributors submitted data directly to CAQH. All data submissions were reviewed and evaluated for missing or incomplete data, and for potential errors. Any probable deficiencies were discussed directly with the submitting entity and were adjusted as necessary.

All transactions were classified in three categories:

Fully Electronic – Includes electronic transactions conducted using the adopted HIPAA standard (shown in Table 1).

Partially Electronic – Includes partially electronic solutions, including web portals and IVR systems.

Fully Manual – Includes all transactions requiring end-to-end human interaction, including telephone, fax, and mail.

Cost of Transactions

Separate, but comparable, data collection tools were developed for health plans and healthcare providers to estimate the fully loaded costs (e.g., including personnel benefits and other personnel-related overhead costs) for each transaction. Milliman, Inc. and NORC used the same data collection tools for healthcare providers in 2014 and 2015. Respondents rely on a variety of internal reporting systems to produce cost and labor time estimates. These exact systems vary across health plans and healthcare providers. Whether the transaction was electronic or manual, estimates include only resources required to complete the actual transaction; they do not include the labor or other cost associated with preparing materials for the transaction, resolving issues with the transaction, or subsequent follow-up. Transactions were classified in two categories for all cost-related analyses:

Electronic – For health plans, these include all transactions conducted using either the HIPAA standardized transaction, comparable electronic data interchange technology, web portal, or IVR (e.g., fully electronic and partially electronic from above). For healthcare providers, these include only those transactions conducted using the adopted HIPAA standard (e.g., fully electronic from

above), as web portal and IVR transactions require full human effort on the provider side of the transaction.

Manual – For health plans, these include all transactions conducted via telephone, fax, or mail (e.g., fully manual from above). For healthcare providers these include the same with the addition of web portal and IVR transactions (e.g., partially electronic and fully manual from above).

Data Analysis

For the purposes of this report, all analyses were conducted in the aggregate to ensure individual contributors were not identifiable according to established data-sharing agreements. Some data contributors were not capable of reporting adoption and cost for all transactions or all methods. Plans not able to report all methods, or not reporting during the entire study period (2012-2014), were not included on a transaction-by-transaction basis.

Adoption Rates

For each transaction studied, the annual adoption rates were computed by method as a proportion of the total volume by transaction. The annual percentagepoint change is presented for transactions with multiple years of available data, and was calculated as the difference in percent in Year 2 and percent in Year 1.

Transaction Cost Estimates

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, by transaction. The weighted averages per transaction by method were used to estimate the potential cost savings for each transaction as the difference between the cost of electronic and manual transactions.

Potential Commercial Healthcare Industry Savings

For each transaction, the potential national savings were 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. As such, cost savings are estimated with consideration for both sending and receiving transactions. Transactions are still classified as outlined above, electronic and manual. This two-step process is outlined below:

Estimate National Volume – For each transaction, the total volume of transactions occurring in the U.S. commercial industry is estimated based on the proportion of the U.S. commercial enrollment represented by contributing health plans. The volume of covered lives for all non-participating commercial health plans is captured from the AIS Directory of Health Plans. The extrapolated national volumes of each transaction are calculated by method as follows for both health plans and providers:

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

Estimate National Cost – To estimate the potential savings from the industry achieving full adoption of electronic transactions, costs are estimated by multiplying the estimated national volume of manual transactions (from the previous step) by the cost difference between the electronic and manual transactions, by transaction type.

Data Limitations

The estimates and projections in this report are subject to several limitations. Some of these are definitional – an inherent part of the study process chosen – but in other cases gradual improvements are being made to address the design. Importantly, all of the responding health plans and providers have volunteered to submit data. This may indicate that these organizations have greater resources available for this analysis than others, or have already begun to assess and improve their efforts in this area. Some Index respondents may, therefore, reflect first movers. Therefore, it is possible that the results and estimates lean closer toward industry best practices in some cases, rather than industry averages or median performance.

Adoption Rates

Several factors, which vary by transactions, may impact the adoption estimates. A key factor is the possibility of bundled or duplicative transaction counts. For example, call center representatives may respond to multiple questions in a single phone-based inquiry (i.e., multiple patients; multiple diagnosis codes; or multiple reasons, such as eligibility, coverage, benefits, appeals, resubmissions, or status of claim within the adjudication cycle). This fundamental characteristic of health plan operations may cause transaction counts to be understated. Thus, some health plans are unable to track separate transactions as unique events. Also, several plans reported now posting 100 percent of remittances to a plan-sponsored web portal, regardless of whether the remittance was also sent via HIPAA standardized transaction, in combination with EFT, or via printed paper. The Index reports the number remittances that were accessed via the portal, so there may be some duplicate counts.

The count of claims submitted and payments are not comparable, as some health plans were unable to distinguish between claims submissions for payment and transmission of encounter information made only for the purpose of reporting care delivery (e.g., capitation). Similarly, adjudicated claims resulting in no payment were included. The counts of medical claim payments do not include payments made by patients directly, such as through health savings accountss.

Cost Estimates

By definition, costs and savings are reported solely for the transaction itself, not the time and cost associated with gathering information for the transactions. These untracked costs could be extensive for some health plans and providers, but to the extent they would be incurred regardless of whether the transactions were electronic or manual, are not included in these analyses. However, some forms of electronic transactions may reduce the cost of information gathering by providers, and details on these costs may be added to future analyses, as well as vendor cost associated with electronic transactions. The simplifying convention of estimating savings opportunity, based on the full gap between current levels of electronic administrative transaction adoption and full adoption, was used. This latter approach overestimates the opportunity to reduce costs in cases where achieving 100 percent adoption may not be realistic.

The estimates of potential savings also assume a strict demarcation of manual vs. electronic transactions, where in reality some automated processes may sometimes require manual oversight. Clearinghouses that act as intermediaries between health plans and healthcare providers may sometimes convert transactions from manual to electronic, or vice versa. This may cause over- or under-estimation of the potential for savings, especially for healthcare providers.

On balance, the potential industry savings is likely underestimated in some areas and overestimated it in others. Ongoing refinements in data specification and collection will improve the precision of future estimates. Also, the addition of new transactions to the study will likely lead to changes in the aggregated estimates of potential savings as the CAQH Index evolves.