



2013 U.S. HEALTHCARE  
EFFICIENCY INDEX

Electronic Administrative Transaction  
Adoption and Savings  
REVISED MAY 5, 2014

2014 CAQH INDEX<sup>™</sup>

Electronic Administrative Transaction  
Adoption and Savings  
CALENDAR YEAR 2013

2015 CAQH INDEX<sup>™</sup>

Electronic Administrative Transaction  
Adoption and Savings  
CALENDAR YEAR 2014

2016 CAQH INDEX<sup>™</sup>

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

2017 CAQH INDEX<sup>™</sup>

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

2018 CAQH INDEX<sup>™</sup>

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

2019 CAQH INDEX<sup>™</sup>

Conducting Electronic Business Transactions:  
Why Greater Harmonization Across  
the Industry is Needed

2020 CAQH INDEX<sup>™</sup>

Closing the Gap: The Industry Continues  
to Improve, But Opportunities for  
Automation Remain

2021 CAQH INDEX<sup>™</sup>

Working Together:  
Advances in Automation During  
Unprecedented Times

# 2022 CAQH INDEX<sup>®</sup>

A Decade of Progress

# 2022 CAQH INDEX

## A Decade of Progress

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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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**CAQH**<sup>®</sup>  
Explorations

| INDEX<sup>®</sup>



# TRACKING A DECADE OF PROGRESS

For the past decade, the CAQH Index has been a unique and important resource for government and industry decisionmakers, researchers and the media.

By tracking automation along the healthcare administrative workflow and identifying opportunities for improvement, report findings have enabled health plans, providers, government, and vendor organizations to benchmark progress and set a course for greater efficiency and cost savings.

Given the importance of the Index and the commitment to increasing automation, medical health plans representing 204 million members, 60 percent of covered lives, now contribute data to the research.

## Automation Increased

For over ten years, the CAQH Index has tracked the progress the medical industry has made in utilizing electronic processes. Significant gains have been made towards automating tasks along the administrative workflow — a notable accomplishment — despite the ever-changing healthcare landscape.

The level of automation for the single most common administrative transaction studied in the Index, eligibility and benefit verification, increased by 25 percentage points over the last decade. Today, nine out of ten eligibility verifications are conducted electronically. Adoption of electronic coordination of benefits (COB) increased 42 percentage points since the Index began tracking it in 2015. Today, 91 percent of these transactions are automated. Adoption of electronic prior authorizations quadrupled (up 21 percentage points) since 2014.

Although more work remains, health plans, providers and millions of insured Americans are benefitting from the investments and progress to date as administrative tasks become more streamlined. In fact, according to the 2022 Index, increased automation and streamlined processes implemented so far have reduced the cost of our healthcare system by \$187 billion annually.

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**“The definitive industry benchmark for the adoption rates of administrative transactions for ten years, the CAQH Index has proven to be an invaluable tool for policymakers and healthcare stakeholders.”**

**Robert M. Tennant, MA** | Vice President, Federal Affairs, *WEDI*

## MILESTONES: CAQH INDEX REPORTS\*

2013

The first CAQH Index is published

2014

Index begins to track attachments

2015

Dental transactions reported

Index begins reporting on coordination of benefits

2016

Annual volume of transactions researched by the Index exceeds 5 billion

2017

Index begins reporting on acknowledgements

Medical plans covering 155 million members, representing 51 percent of covered lives, participate in the Index

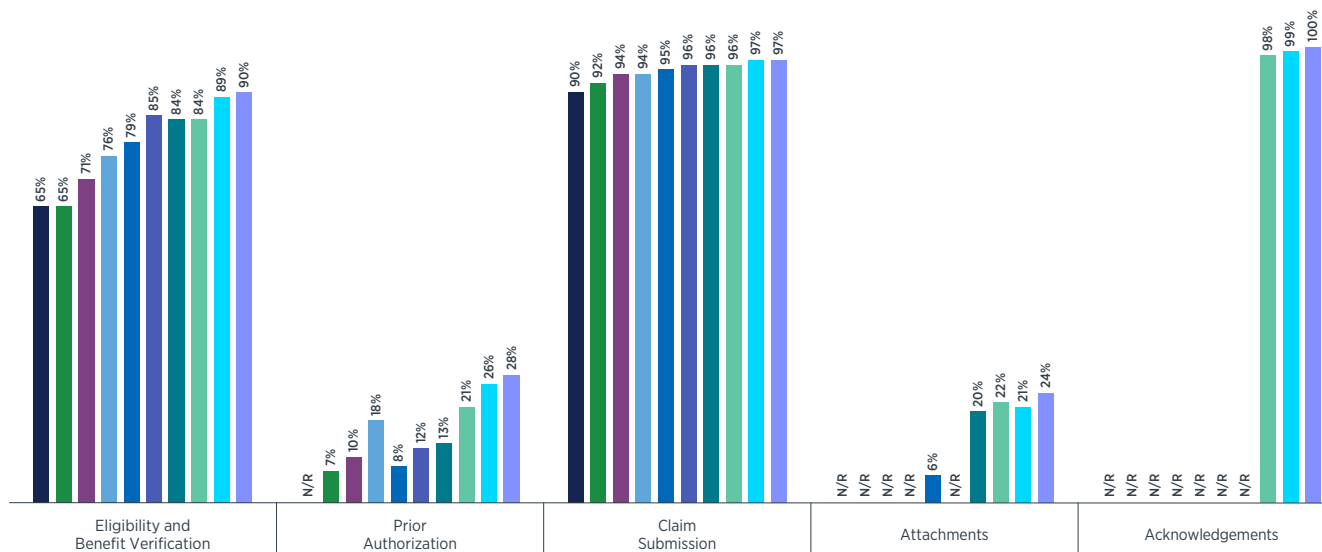
\* Data for the Index reports represent the previous calendar year.

## Healthcare and the Index Evolved

As healthcare models, requirements and technology evolved over the last ten years, so too has the Index. Initially only covering the medical industry, the Index began reporting on the dental industry in the 2015 Index. Over time, CAQH has also expanded its research to track additional transactions, such as prior authorization, coordination of benefits and attachments as well as relevant industry topics such as FHIR readiness, patient attribution, and APIs.

Increased participation in the Index has allowed for more robust analyses to be conducted and new metrics to be tracked. The 2019 CAQH Index began tracking spend associated with conducting administrative transactions, cost

## 10-Year Medical Plan Adoption of Fully Electronic Administrative Transactions 2013-2022 CAQH Index



N/R = Not Reported

Index begins tracking cost avoided, spend and portal savings

2019

Pharmacy Services Index launched

Added questions related to FHIR and VBP

2020

Annual volume of transactions reported by the Index reaches 10 billion

Medical plans covering more than 200 members, representing 61 percent of covered lives, participate in the Index

2021

Measured impact of COVID-19

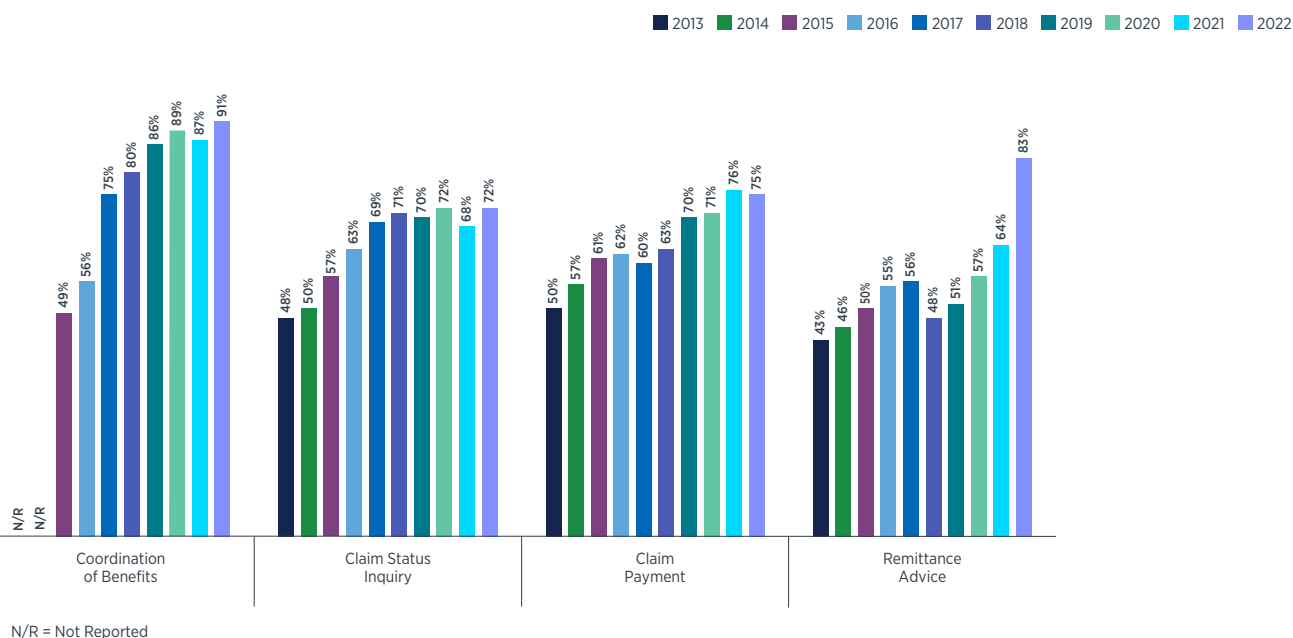
2022

CAQH Index celebrates 10 years

avoided by conducting transactions electronically and savings associated with switching from using portals to fully automated processes. These new metrics provide the industry with a greater understanding of the business of healthcare and challenges health plans and providers face.

### Understanding the Impact of COVID-19

The last two years have been particularly challenging for the healthcare industry as COVID-19 touched every level of healthcare. Given that the Index is conducted annually, the research has been able to capture the impact COVID-19 had and is still having on the administrative workflow — the only data collection effort to do so. The previous CAQH



**“We have been able to utilize the CAQH Index as a comparison tool for cost and utilization for our administrative transactions. Seeing the baselines and ranges helps us determine where there may be opportunities in cost reduction.”**

**Tab Harris** | Senior Director, Provider Connectivity Solutions, *Florida Blue*

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Index highlighted the impact new and changing telemedicine requirements had on administrative functions and how telework resulted in reliance on technology and automated processes. Understanding these changes is important as the industry works to maintain and improve the progress made to date.

### **Informing Policy Development**

While findings from the Index have helped industry decisionmakers benchmark progress and plan investments, it has also been an indispensable resource for policymakers. Year-over-year improvements in automation have had a profound impact on the cost of healthcare to consumers, businesses and the economy. As such, government agencies, including the National Committee on Vital and Health Statistics (NCVHS), the Centers for Medicare and Medicaid Services (CMS) and others, cite Index data and recommendations and use the research to inform their policymaking to reduce administrative burdens, increase standardization of workflows and promote patients over paperwork.

### **Partnerships and Collaboration**

None of this is possible without collaboration and support from stakeholders across the healthcare industry. The CAQH Index Advisory Council, comprised of experts in administrative transactions, data analysis and healthcare management representing providers, health plans, government, vendors and other industry partners, guides this research ensuring relevant topics and metrics are collected and valuable insights are shared. Numerous medical and dental plans and provider organizations contribute data and participation continues to increase — enriching the results. To support the industry and add value, CAQH, along with the Index Advisory Council, is committed to enhancing the data collection effort to provide industry with relevant insights while remaining focused on key benchmark metrics — adoption, volume, spend and savings opportunities.

**“The CAQH Index provides an in-depth look at industry adoption of administrative transactions. This data supports the industry’s ability to leverage breakthroughs on improving electronic transaction adoption in the healthcare industry.”**

**Suzanne Lestina, FHFMA, CPC**  
Executive Director, Revenue Integrity  
and Strategic Innovation, *University of  
Chicago Medical Center*



**APRIL TODD**

Chief Policy and Research Officer

# Transactions

To date, the CAQH Index collects annual volume and costs associated with the following nine transactions for the medical and dental industry:

|                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eligibility and Benefit Verification</b><br>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 plan and a response from the health plan to the provider. Does not include referrals. HIPAA Transaction Standard: ASC X12N 270/271. | <b>Prior Authorization</b><br>A request from a provider to a health plan to obtain authorization for healthcare services or a response from a health plan for an authorization. Does not include referrals. HIPAA Transaction Standard: ASC X12N 278. | <b>Claim Submission</b><br>A request to obtain payment or transmission of encounter information for the purpose of reporting delivery of healthcare services. HIPAA Transaction Standard: ASC X12N 837.                                                        | <b>Attachments</b><br>Additional information submitted with claims for payment, claim appeals or prior authorization, such as medical records to support a claim or to explain the need for a procedure or service. Transaction Standards: ASC X12N 275, HL7 CDA. | <b>Acknowledgements</b><br>A health plan's response to a provider or provider's clearinghouse that they received information from the provider or clearinghouse; or a confirmation received by a provider that the information shared with a health plan has been rejected or accepted. Transaction Standard: ASC X12N 277CA/999. |
| <b>Coordination of Benefits</b><br>Claims that are sent to secondary payers with explanation of payment information from the primary payer to determine remaining payment responsibilities. HIPAA Transaction Standard: ASC X12N 837.                                                                                             | <b>Claim Status Inquiry</b><br>An inquiry from a provider to a health plan to determine the status of a healthcare claim or a response from the health plan. HIPAA Transaction Standard: ASC X12N 276/277.                                            | <b>Claim Payment</b><br>An electronic funds transfer (EFT) from a health plan's bank to a provider's bank; including payment and data specific to the payment. HIPAA Transaction Standard: NACHA Corporate Credit or Deposit Entry with Addenda Record (CCD+). | <b>Remittance Advice</b><br>The transmission of explanation of benefits or remittance advice from a health plan to a provider explaining a payment. HIPAA Transaction Standard: ASC X12N 835.                                                                     |                                                                                                                                                                                                                                                                                                                                   |

# Key Terms and Financial Metrics

Throughout the report, various key terms and financial metrics are used to report on annual automation trends, costs, and savings opportunities available for the medical and dental industry:

| KEY TERMS                                                                                                                                                         |                                                                                                                                                                                          |                                                                                                                |                                                                                                                       |                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Adoption</b><br>The degree to which medical and dental plans and providers complete transactions using fully electronic, partially electronic or manual modes. | <b>Estimated Volume</b><br>The number of fully electronic, partially electronic and manual transactions reported by medical and dental plans and providers weighted to a national level. | <b>Fully Electronic</b><br>Transactions conducted using a HIPAA-mandated standard, unless otherwise specified. | <b>Partially Electronic</b><br>Transactions conducted using web portals and interactive voice response (IVR) systems. | <b>Fully Manual (Manual)</b><br>Transactions requiring end-to-end human interaction such as telephone, mail, fax and email. |

## FINANCIAL METRICS

### Cost Per Transaction

The labor costs (e.g., salaries, wages, personnel benefits and related overhead costs) associated with fully electronic, partially electronic and fully manual transactions as reported by medical and dental plans and providers. Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Costs do not include system costs (e.g., maintaining, building or buying software or other equipment).

### Estimated Spend

The amount that medical and dental plans and providers spend conducting a transaction in total and by modality.

### Cost Avoided

The amount that medical and dental plans and providers have saved by not conducting transactions using partially electronic or fully manual modes.

### Cost Savings Opportunity

The cost savings that could be achieved by switching the remaining partially electronic and fully manual transactions to fully electronic transactions.

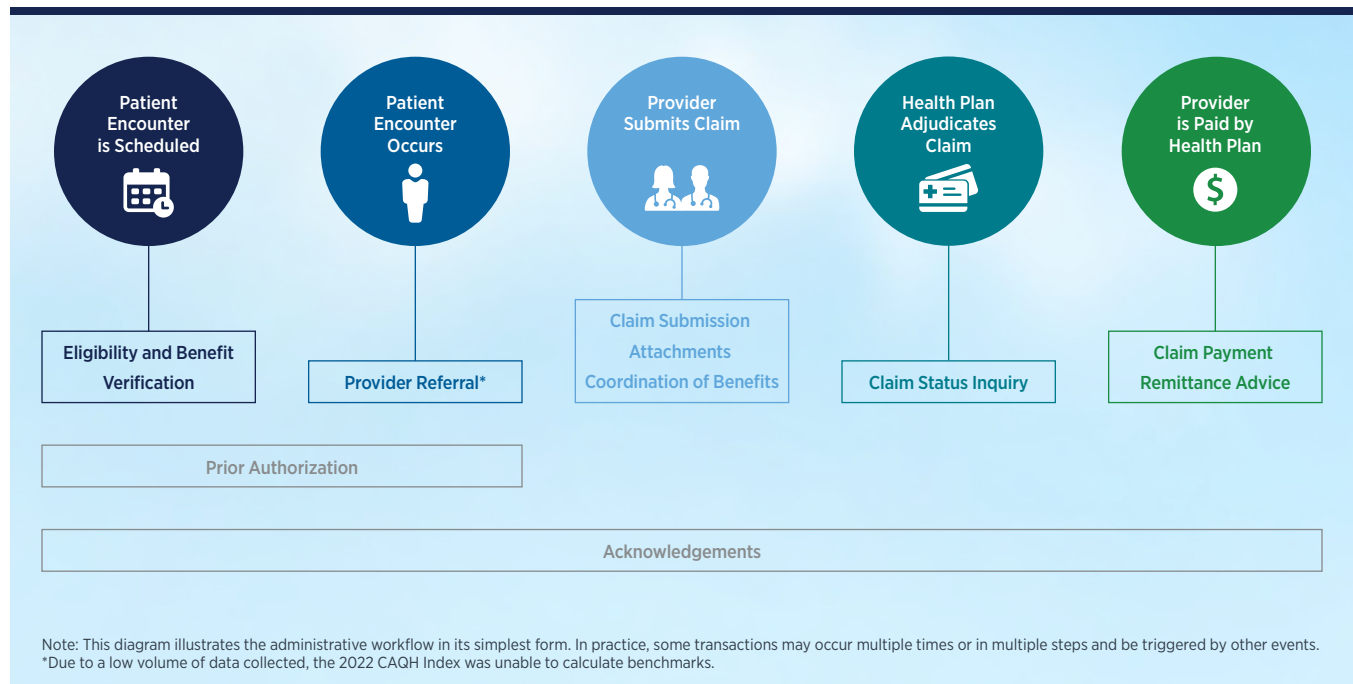
### Time Savings Opportunity

The time that providers could save by switching the remaining partially electronic and fully manual time to conduct a transaction to a fully electronic time.

## The Administrative Workflow

The CAQH Index measures and benchmarks transactions along the administrative workflow. This workflow begins with a patient scheduling a medical visit and ends with acknowledgement and receipt of payment for services rendered. To measure these transactions, volume and costs are calculated for the modes in which transactions are conducted – fully electronic (typically an X12 transaction), partially electronic (web portal or interactive voice response system) or fully manual (phone, mail, fax, email).

While the industry continues to make progress automating transactions, opportunities exist to reduce time and costs associated with conducting administrative tasks. Collaboration and support across the industry are needed to address and overcome barriers as challenges related to the pandemic continue to impact the workflow and overall spend.



# KEY FINDINGS

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The first year of the pandemic brought about changes in social behaviors, healthcare policies and administrative processes to help reduce the transmission of COVID-19 and ease strain on healthcare workers and systems.<sup>1,2</sup> These changes impacted utilization and administrative transaction volume, workflows and resources. Utilization and overall transaction volume dropped, use of electronic transactions increased as remote work expanded, and costs associated with conducting manual transactions rose due to complex and varied policies and requirements<sup>3</sup> related to telemedicine and COVID-19 cases.

A year later, in 2021, while COVID admissions and cases were declining and healthcare utilization was increasing, use of electronic transactions continued to rise for most transactions. Automated processes implemented during COVID-19 resulted in more timely responses and outcomes. Staffing shortages during the pandemic, however, increased salaries by almost 10 percent as medical facilities were forced to pay more to attract and retain workers,<sup>4,5</sup> countering the savings achieved from the transition to automated workflows. Higher staff salaries impacted costs to complete administrative tasks and overall spend as transaction volumes increased. In several cases, the workforce shortage resulted in providers completing administrative tasks or less experienced staff being hired, impacting the time to complete tasks. Often it took longer for inexperienced or new staff to complete tasks due to a lack of relevant knowledge and skills.

While COVID-19 began to subside in 2021, changes to the administrative workflow necessitated by the pandemic, specifically reliance on and use of electronic processes, continued.<sup>6</sup> Increased patient visits and workforce issues, however, posed challenges impacting the time and cost to conduct administrative tasks along the revenue cycle. To support and maintain the progress made over the last decade in automating processes, the healthcare industry needs to work together as it deals with new challenges related to staffing shortages as utilization and transaction volume recovers. By transitioning to fully electronic transactions, the industry can save nearly \$25 billion, or 41 percent of the current annual spend, \$60 billion. The industry has already avoided spending \$187 billion annually by automating transactions.

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1 Maddie Mason, "Updates on Current Federal Telehealth Legislation," National Health Council, August 10, 2020, <https://nationalhealthcouncil.org/blog/updates-on-current-federal-telehealth-legislation/>.

2 "Prior Authorization (PA) Policy changes Related to COVID-19," American Medical Association, February 5, 2021, <https://www.ama-assn.org/system/files/2021-01/prior-auth-policy-covid-19.pdf>.

3 "2021 CAQH Index," CAQH, January 31, 2022, <https://www.caqh.org/sites/default/files/explorations/index/2021-caqh-index.pdf>.

4 Jakob Emerson, Kelly Gooch, Alia Paavola, Marissa Plescia, "Hospitals are bolstering wages. Is it sustainable?" Becker's Hospital Review, April 4, 2022, <https://www.beckershospitalreview.com/compensation-issues/hospitals-are-bolstering-wages-is-it-sustainable.html>.

5 "Are health care wages unsustainable?" Advisory Board, April 7, 2022, <https://www.advisory.com/daily-briefing/2022/04/07/hospital-wages>.

6 "How to Protect Yourself and Others," Centers for Disease Control and Prevention, October 19, 2022, <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>.

## KEY FINDINGS

# ADOPTION

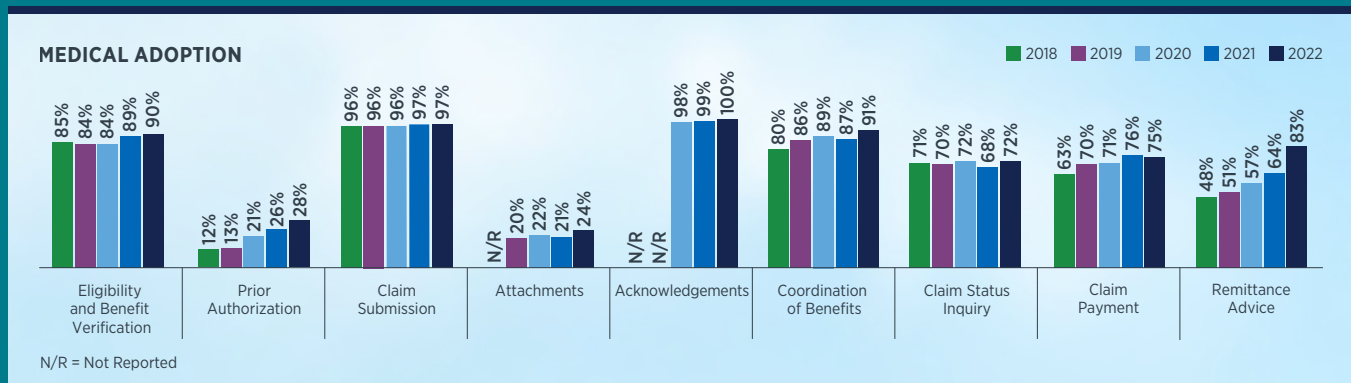
Electronic adoption improved for almost all **medical** transactions except claim payment which declined slightly and claim submission which remained stable. All **dental** transactions improved except for acknowledgements which remained stable. Use of automated processes by health plans and providers, brought on by the pandemic, expanded.

# +5

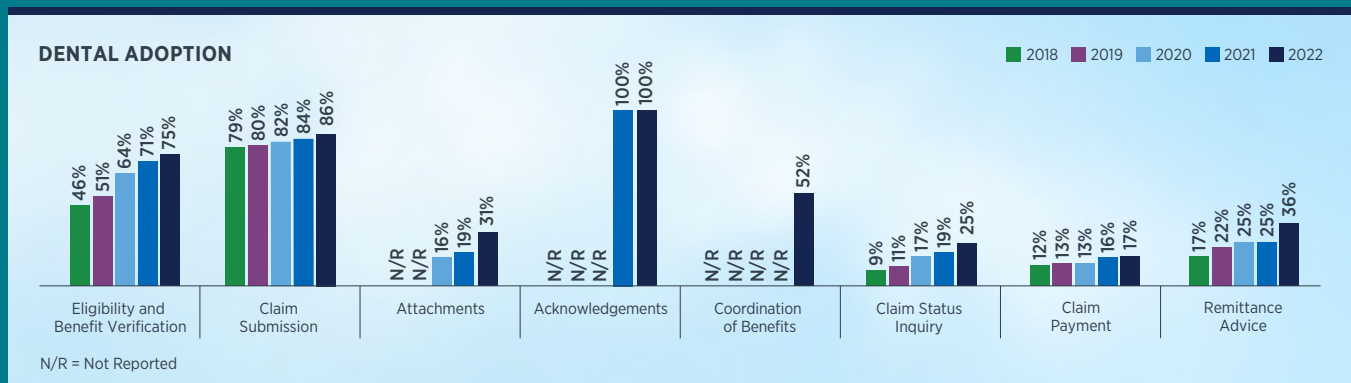
percentage points

The average **increase** in adoption across the **medical** and **dental** industries.

## Medical Plan Adoption of Fully Electronic Administrative Transactions 2018-2022 CAQH Index



## Dental Plan Adoption of Fully Electronic Administrative Transactions 2018-2022 CAQH Index



## KEY FINDINGS

# VOLUME

**Medical** and **dental** administrative transaction volume **increased** after decreasing in 2020. Utilization increased as offices slowly re-opened and social distancing requirements were relaxed. COVID-19 vaccines became available in early 2021 adding to the increase in medical volume.

# +28%

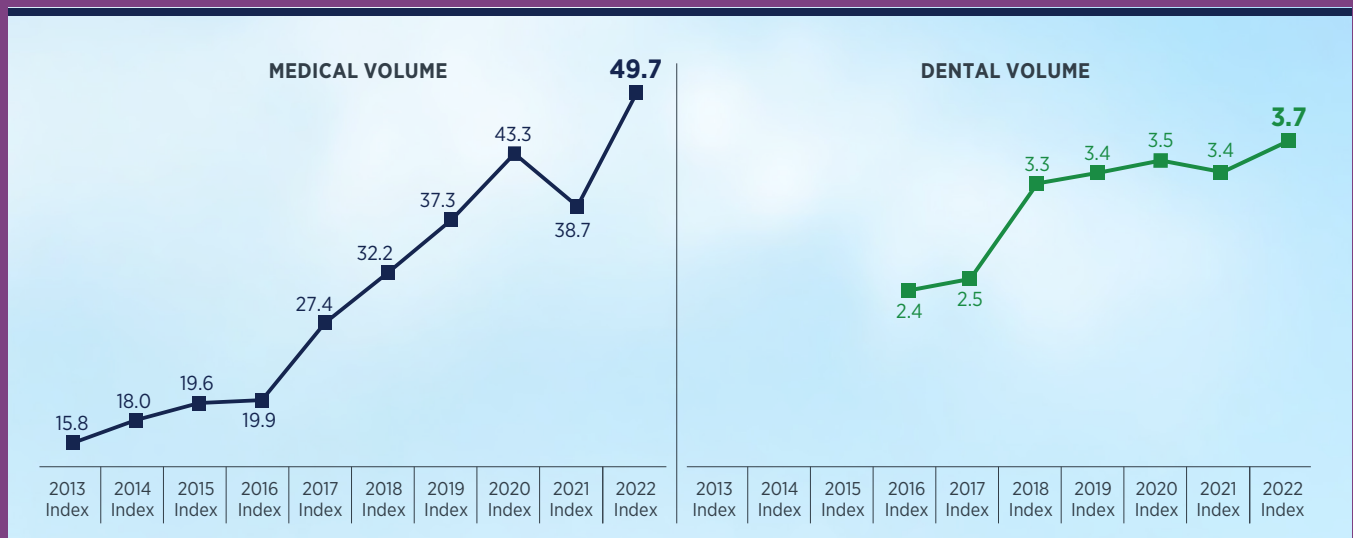
**increase** in overall  
**medical** transaction volume

# +9%

**increase** in overall  
**dental** transaction volume

**Electronic** volume **increased** for the **medical** (30 percent) and **dental** (18 percent) industries and continues to account for the highest percentage of total volume for both industries, at 82 percent and 51 percent, respectively.

## Medical and Dental Industry Estimated National Volume 2013-2022 CAQH Index (in billions)



Note: From year to year reported transactions may change due to low volume collected.

## KEY FINDINGS

# SPEND

Although adoption and electronic volume increased, higher utilization and provider time to complete transactions resulted in an **increase** in total annual spend for **both** industries. For the **medical** industry, provider time to conduct transactions increased, on average, 15 percent which accounted for more than half of the increase in total spend for most transactions.<sup>7</sup> New staff often required more time to complete administrative tasks. However, for the eligibility and prior authorization transactions, increases in transaction volume drove the increase in spending.

**+47% to  
\$55.0B**

The amount **medical** spending **increased**

(Largest increase in spend: claim submission (83 percent)).

**+23% to  
\$5.4B**

The amount **dental** spending **increased** after decreasing in 2020

(Largest increase in spend: remittance advice (43 percent)).

### Medical and Dental Industry Estimated National Spend 2013-2022 CAQH Index (in billions)



Note: From year to year reported transactions may change due to low volume collected.

<sup>7</sup> Impact analyses were conducted on individual transactions to better understand the drivers of spend, controlling for volume, cost and time. Analyses indicated that time had the largest impact on transaction spend except for eligibility and benefit verification and prior authorization, where volume had the greatest impact.

## KEY FINDINGS

# COST SAVINGS OPPORTUNITIES

The cost savings opportunity **increased** for the **medical** industry as provider volume and cost to complete tasks increased. Efficiencies gained via automated processes were countered by increases in cost and volume. For the **dental** industry, cost savings remained **stable**.

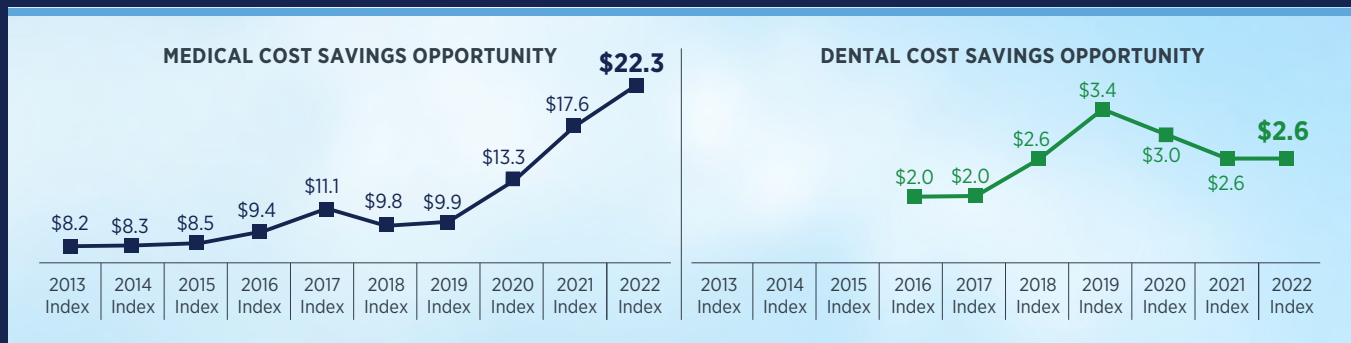
The **medical** industry cost savings opportunity **increased to**

**\$22.3B**

The **dental** industry cost savings opportunity **remained stable at**

**\$2.6B**

## Medical and Dental Industry Estimated National Cost Savings Opportunity 2013-2022 CAQH Index (in billions)



## Medical Industry Average Cost per Transaction for Electronic and Manual Transactions 2013-2022 CAQH Index



Note: From year to year reported transactions may change due to low volume collected.

## KEY FINDINGS

# ADMINISTRATIVE WORKFLOW

As the COVID-19 emergency waned in 2021, the administrative workflow for the medical and dental industries was impacted by continued automation, increased patient encounters and challenges related to staffing.

### Automation

Use of automated workflows to complete administrative tasks continued to expand after staff relied heavily on them during COVID-19. Despite the small increases in electronic costs due to staffing challenges, electronic transactions remained less costly and burdensome than manual processes, allowing providers and staff to focus more on patient care.

### Utilization

Healthcare utilization rose as policies, regulations and restrictions employed to curb the spread of COVID-19 lessened. Medical and dental offices, which were either temporarily closed or utilizing more telehealth appointments, re-opened and began maintaining consistent office hours. COVID-19 vaccines were administered in early 2021 which also increased utilization as individuals became immunized.<sup>8,9</sup>

### Workforce

Medical professionals and administrative staff burnt out from long, grueling, emotional days during the peak of COVID in 2020 started to leave the workforce in 2021, causing staffing shortages and demand issues.<sup>10</sup> These shortages led to higher salaries as facilities tried to not only recruit new staff but also maintain current staff. In some cases, less qualified staff were hired out of necessity, impacting the time to complete administrative tasks due to a steep learning curve.<sup>11</sup>

### Spend

Despite the increase in electronic adoption and volume, spend increased for the medical and dental industries. An increase in provider time to conduct administrative tasks and overall transaction volume resulted in higher spending. Some providers surveyed indicated that they started completing administrative tasks as they had not rehired administrative staff who were let go or chose to leave during the start of COVID-19, driving up the cost and time to complete tasks.

8 "COVID-19 Vaccine: Physician FAQs," American Medical Association, accessed November 14, 2022, <https://www.ama-assn.org/system/files/2020-12/covid-19-vaccine-physician-faqs.pdf>.

9 "FDA Approves First COVID-19 Vaccine," U.S. Food and Drug Administration, August 23, 2021, <https://www.fda.gov/news-events/press-announcements/fda-ap-proves-first-covid-19-vaccine>.

10 "U.S. labor market shows improvement in 2021, but the COVID-19 pandemic continues to weigh on the economy," U.S. Bureau of Labor Statistics, June 2022, <https://www.bls.gov/opub/mlr/2022/article/us-labor-market-shows-improvement-in-2021-but-the-covid-19-pandemic-continues-to-weigh-on-the-economy.htm>.

11 Abha Bhattarai, "Worker shortages are fueling America's biggest labor crises," The Washington Post, September 16, 2022, <https://www.washingtonpost.com/business/2022/09/16/worker-shortage-strikes-economy/>.

# Industry Call to Action

Over the past ten years, the industry has made significant progress in automating most administrative processes and in the past year that progress has continued. One year after the onset of COVID-19, which brought about changes in social behaviors and administrative workflows, utilization increased as COVID vaccinations were rolled out and people began rescheduling doctor's appointments that were postponed or canceled due to the pandemic. Automated processes that increased during the start of COVID as people adapted to working from home and offices temporarily closed continued. Health plans and providers exchanged more electronic transactions and fewer manual ones. However, despite the increase in automation, staffing shortages introduced challenges resulting in higher spending on administrative transactions. Newly hired staff, some inexperienced, needed more time to complete tasks as they became familiar with requirements and often complex systems. Higher salaries, due to workforce demands, added to the increase in spend as the cost to complete tasks rose.

As utilization continues to increase and staffing shortages persist, the industry needs to remain focused and work together to maintain and expand the use of automated administrative processes – a milestone of the last decade. At the same time, the industry needs to consider the impact that staffing is having on the time to complete tasks and ultimately overall spend. To support the progress made and help reduce burden associated with administrative tasks, CAQH proposes the following actions for the industry:

## **Support and Understand Automated Processes**

In 2020, changes to administrative workflows, necessitated by the pandemic, resulted in greater adoption of automated processes and technology as people adapted to working from home and offices temporarily closed. The use of automated processes continued to expand the following year as health plans and providers conducted more electronic transactions to exchange information.

Despite the growth in automation, the cost to conduct electronic transactions increased due to changes in staffing and the influx of new hires. While electronic transactions continue to cost less than transactions conducted manually or via a portal, understanding what is driving the increase in costs is essential to maintaining and encouraging electronic adoption. Continually monitoring and identifying challenges that providers and staff experience when completing tasks electronically will help the industry address pain points as business needs change and achieve greater levels of automation, thus reducing overall administrative burden.

## **Focus on Training**

The second year of COVID brought about higher spending on administrative transactions. Providers spent more time completing administrative tasks resulting in higher costs. Greater utilization brought about an increase in overall transaction volume, which added to the growing spend.

To help control spend, organizations must consider the needs of staff, particularly newly hired and inexperienced staff who may not be familiar with information required to complete a transaction. New and different systems may also pose challenges adding to the time to complete tasks. Educational sessions focusing on high volume and cost tasks, specifically eligibility and benefit verification, prior authorization, claim submission and claim status inquiry, may provide staff with a greater ability to exchange these transactions, thus reducing the time to complete them. Training staff on how to complete administrative tasks will be particularly useful as utilization and transaction volumes continue to rise.<sup>12,13</sup>

## Promote the Value of Standardization

Noted throughout the report, staffing shortages and higher volumes impacted the time and cost to complete administrative transactions. As staffing shortages continue,<sup>14</sup> the industry needs to collaborate on strategies and solutions to help deal with the increased burden.<sup>15,16</sup> Monitoring and adapting to changes in business needs and environmental factors through ongoing standardization can help simplify administrative tasks, thus reducing the time and cost to complete them. To encourage and promote further standardization, standards and operating rules must adapt to changing and evolving needs and be adopted by governmental and industry organizations on a more frequent and routine basis.

While the industry continued to make progress automating administrative tasks, challenges arose which impacted provider burden and overall spend. To help combat and control these challenges while growing automation, stakeholders must collaborate on strategies to minimize increasing costs. Streamlining the administrative workflow to adapt to changing needs will help ease provider burden associated with completing these tasks, allowing for better and more accurate care coordination and quality of care for the patient. Over the last ten years, the industry has steadily increased adoption of automated processes, demonstrating commitment to reducing administrative burden, utilizing electronic business processes and improving patient experiences—trends to be celebrated and recognized as healthcare remains complicated and ever-changing.

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12 Jacqueline LaPointe, “COVID-19 Diagnosis Leads to More Healthcare Utilization Later,” RevCycle Intelligence, August 17, 2022, <https://revcycleintelligence.com/news/covid-19-diagnosis-leads-to-more-healthcare-utilization-later>.

13 Victoria Bailey, “Higher Healthcare Utilization, Intensity Drive Healthcare Spending,” RevCycle Intelligence, October 29, 2021, <https://revcycleintelligence.com/news/higher-healthcare-utilization-intensity-drive-healthcare-spending>.

14 Steven Ross Johnson, “Staff Shortages Choking U.S. Health Care System,” U.S. News and World Report, July 28, 2022, <https://www.usnews.com/news/health-news/articles/2022-07-28/staff-shortages-choking-u-s-health-care-system>.

15 “Are health care wages unsustainable?” Advisory Board, April 7, 2022, <https://www.advisory.com/daily-briefing/2022/04/07/hospital-wages>.

16 “Addressing Wages Of The Direct Care Workforce Through Medicaid Policies,” National Governors Association, November 1, 2022, <https://www.nga.org/publications/addressing-wages-of-the-direct-care-workforce-through-medicaid-policies/>.

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TRANSACTION  
**FINDINGS**  
**2022**

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# Eligibility and Benefit Verification

## Definition

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 plan and a response from the health plan to the provider. Does not include referrals. HIPAA Transaction Standard: ASC X12N 270/271.

## Transaction Highlights

### 1 Adoption Increased

During the second year of the pandemic, electronic adoption slowly increased for the medical industry by one percentage point. Now at 90 percent, electronic adoption of the eligibility transaction has increased by 25 percentage points in the past ten years. For the dental industry, electronic adoption increased four percentage points in the past year as the use of electronic eligibility verification continued to be promoted. Since 2018, electronic adoption of the eligibility transaction has increased by nearly 30 percentage points in the dental industry. The American Dental Association (ADA) continues to collaborate with stakeholders to identify opportunities, solutions and best practices to encourage use of the HIPAA standard.<sup>17,18</sup> Similarly, dental plans are encouraging the use of electronic transactions as provider questions related to eligibility and benefits are one of the top reasons for inbound phone calls.

### 2 Volume Increased

As healthcare utilization climbed, transaction volume rose for both industries. A higher number of medical eligibility verifications were conducted due to higher utilization, people re-scheduling doctor's appointments that were canceled or postponed because of the pandemic, and the administration of COVID-19 vaccinations which often require an eligibility check to determine who to bill.<sup>19</sup> Overall transaction volume for the dental industry rebounded to pre-COVID levels as dental visits resumed.

### 3 Spending Increased – Highest Proportion of Annual Spend

Medical spending increased to \$26.5 billion which accounted for 48 percent of the annual medical spend. Most of the increase in spending was driven by an increase in volume. In contrast, dental spending increased slightly to \$1.3 billion, accounting for 24 percent of the annual dental spend.

### 4 Medical Cost Savings Opportunity Increased, Dental Decreased – Highest Opportunity for Both

The cost savings opportunity for the medical industry increased to \$12.8 billion and decreased to \$664 million for the dental industry. For both industries, eligibility and benefit verifications remain the top savings opportunity. Increases in portal volume and costs for providers drove the increase in medical cost savings, while higher adoption and lower manual volume drove the decrease in dental cost savings.

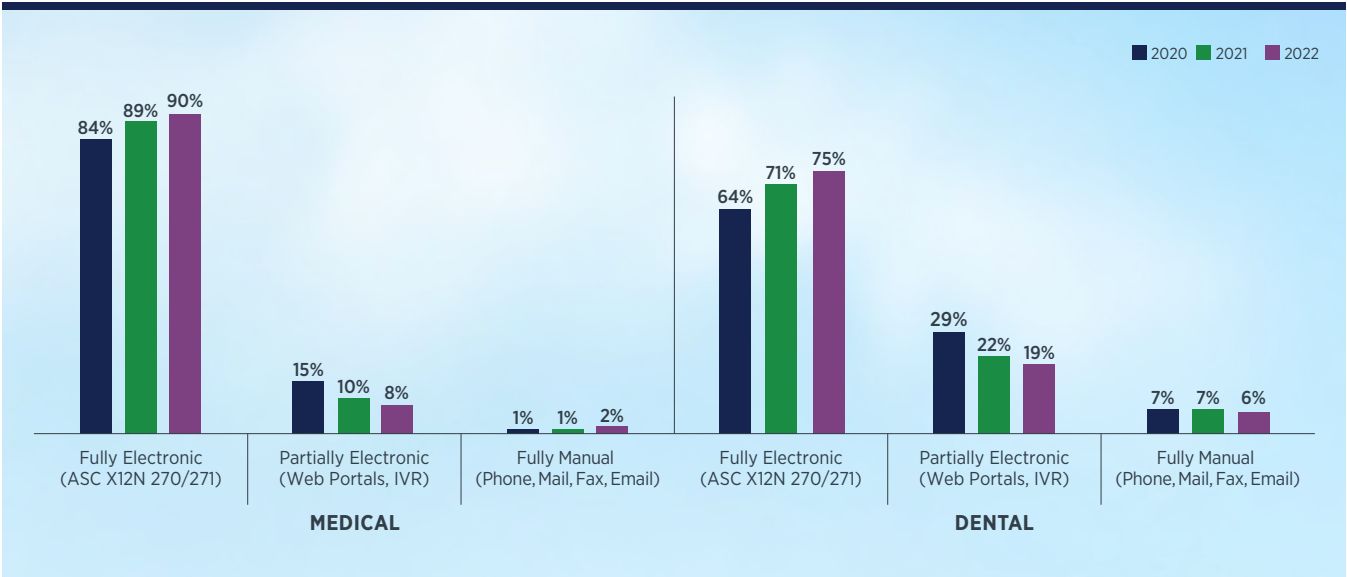
17 David Burger, "ADA selects vendor to investigate root causes of problems with eligibility, verification of benefits," American Dental Association, June 22, 2021, <https://www.ada.org/publications/ada-news/2021/june/ada-selects-vendor-to-investigate-root-causes-of-eligibility>.

18 "Eligibility and Benefits Verification Current State Review and Feasibility Analysis," American Dental Association and Change Healthcare, July 2021, [https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/practice/dental-insurance/eligibility\\_and\\_benefits\\_verification.pdf?rev=b6b-91d8476364746ad77b38a3c9c5ebd&hash=92CBDEC17B2156AE357265679EBD3F97](https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/practice/dental-insurance/eligibility_and_benefits_verification.pdf?rev=b6b-91d8476364746ad77b38a3c9c5ebd&hash=92CBDEC17B2156AE357265679EBD3F97).

19 "HIPAA Eligibility Transaction System (HETS) Health Care Eligibility Benefit Inquiry and Response (270/271) 5010 Companion Guide," Pages 54-55, Centers for Medicare & Medicaid Services, April, 2021, <https://www.cms.gov/files/document/r2021q100-hets-270271-companion-guide-v10-23.pdf>.

ADOPTION

Medical and Dental Plan Adoption of Eligibility and Benefit Verification  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Eligibility and Benefit Verification by Mode  
2020-2022 CAQH Index (in millions)



**SPEND & SAVINGS**

**Eligibility and Benefit Verification: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)**



**COST SAVINGS OPPORTUNITY**

**Electronic Eligibility and Benefit Verification: Cost Savings Opportunity**



**TIME SAVINGS OPPORTUNITY**

**Electronic Eligibility and Benefit Verification: Time Savings Opportunity**



**Recent Enhancements to the CAQH CORE Eligibility & Benefits (270/271) Operating Rules**

In early 2022, CAQH CORE participants approved updates to the CAQH CORE Eligibility & Benefits (270/271) Data Content Rule. The updates include enhancements to address emerging industry needs by requiring eligibility information related to telemedicine, prior authorization, remaining coverage benefits, tiered benefits, and procedure-level information to be communicated in the transaction.

CAQH CORE participants also approved updates to the CAQH CORE Eligibility & Benefits (270/271) Infrastructure Rule. These updates increase weekly system availability and add a quarterly system downtime.

In May 2022, the CAQH CORE Board submitted a letter to the National Committee on Vital Health Statistics (NCVHS) requesting consideration of a set of operating rules for federal adoption including the updated eligibility rules. NCVHS held a hearing in early 2023 to gather industry feedback on the value of mandating these operating rules.

# Prior Authorization

## Definition

A request from a provider to a health plan to obtain authorization for healthcare services or a response from a health plan for an authorization. Does not include referrals. HIPAA Transaction Standard: ASC X12N 278.

## Transaction Highlights

### 1 Adoption Increased

Medical adoption increased by two percentage points. Although electronic adoption continues to remain one of the lowest among the transactions studied after attachments, adoption has increased by 21 percentage points in the past nine years.

### 2 Volume Increased – Highest Increase Among Transactions

Volume increased considerably (61 percent) as restrictions placed on prior authorizations to help ease administrative burden during the COVID-19 outbreak were lifted.<sup>20</sup> Elective procedures, which were postponed due to the pandemic, were rescheduled as doctors and nurses had time to conduct these procedures and beds occupied by COVID patients became available. While volume rose for all three modes, portal use experienced the largest increase in volume among providers and accounted for almost half of the overall volume—a proportion that has increased over the last three years.

### 3 Spend Increased

The medical industry spent more conducting prior authorizations as higher utilization and lifted waivers increased the volume of prior authorizations. Although spending increased 47 percent, it only accounted for two percent of the overall annual medical spend on administrative transactions.

### 4 Time Savings Opportunity

Deemed as one of the most time-consuming administrative transactions by many providers,<sup>21</sup> time associated with conducting a prior authorization manually (20 minutes), via a portal (12 minutes) and electronically (nine minutes) remained the highest among the transactions studied. Given the ongoing burden associated with conducting prior authorizations, public and private efforts continue to focus on best practices, standards, and technology to help reduce burden and support use of the electronic standard.<sup>22,23,24</sup>

20 “Prior Authorization (PA) Policy changes Related to COVID-19,” American Medical Association, February 5, 2021, <https://www.ama-assn.org/system/files/2021-01/prior-auth-policy-covid-19.pdf>.

21 Jacqueline LaPointe, “Prior Authorization Burden Still High Despite COVID Struggles,” RevCycle Intelligence, April 13, 2021, <https://revcycleintelligence.com/news/prior-authorization-burden-still-high-despite-covid-struggles>.

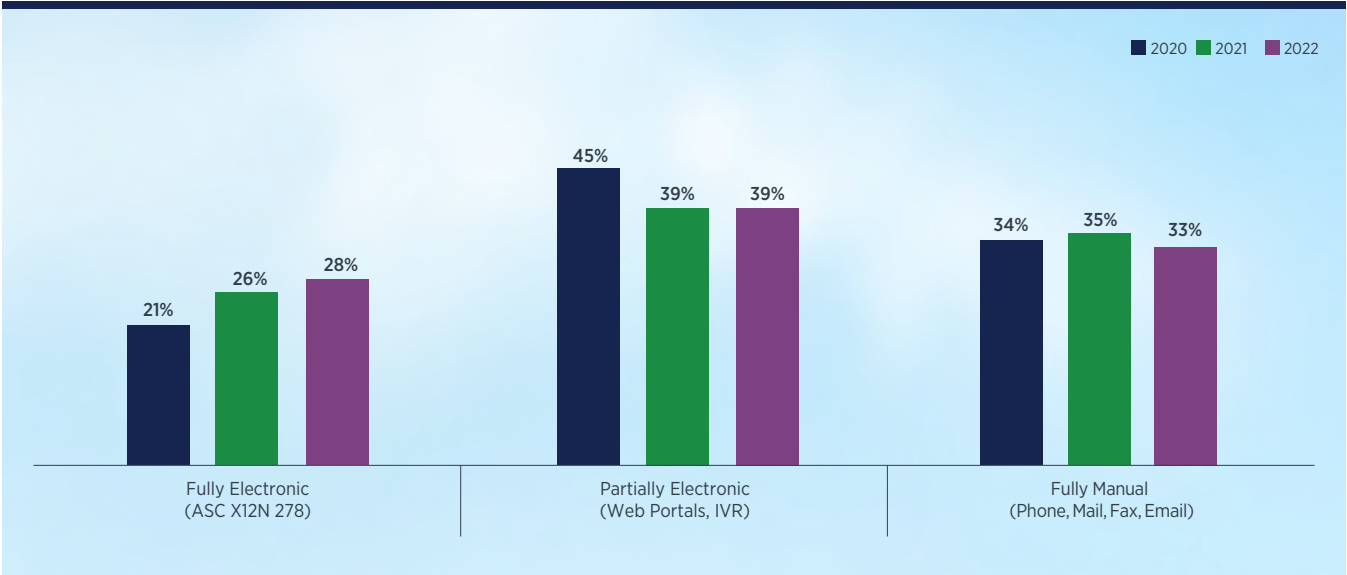
22 “Annual Regulatory Burden Report,” Medical Group Management Association, October, 2022, [https://www.mgma.com/getmedia/099f8c3b-1e4b-4a36-ac2e-18c9215eb2dc/2022\\_MGMA-Regulatory-Burden-Report-FINAL.pdf.aspx?ext=.pdf](https://www.mgma.com/getmedia/099f8c3b-1e4b-4a36-ac2e-18c9215eb2dc/2022_MGMA-Regulatory-Burden-Report-FINAL.pdf.aspx?ext=.pdf).

23 “Update from Standards Subcommittee to the Full Committee,” National Committee on Vital and Health Statistics, March 31, 2021, <https://ncvhs.hhs.gov/wp-content/uploads/2021/04/E-Standards-Subcommittee-presentation-to-FC-03-31-2021-final-508.pdf>.

24 “Policies and Technology for Interoperability and Burden Reduction,” Centers for Medicare & Medicaid Services, December 6, 2022, <https://www.cms.gov/regulations-and-guidance/guidance/interoperability/index>.

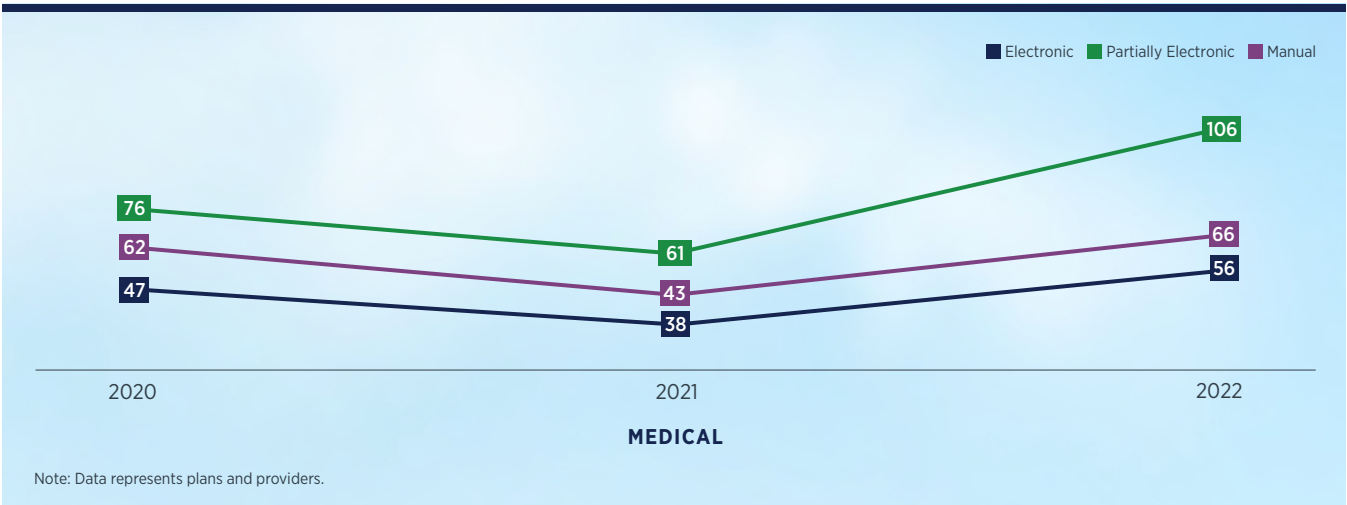
ADOPTION

Medical Plan Adoption of Prior Authorization  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Prior Authorization by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Prior Authorization: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



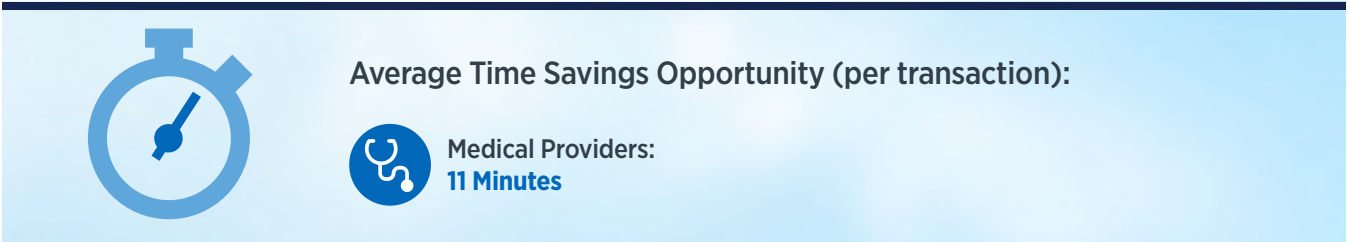
COST SAVINGS OPPORTUNITY

Electronic Prior Authorization: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Prior Authorization: Time Savings Opportunity



# Claim Submission

## Definition

A request to obtain payment or transmission of encounter information for the purpose of reporting delivery of healthcare services. HIPAA Transaction Standard: ASC X12N 837.

## Transaction Highlights

### 1 Medical Adoption Stable, Dental Increased – Among the Highest

Claim submission remains one of the most automated transactions for both industries. Medical adoption remained stable at 97 percent and dental adoption increased two percentage points to 86 percent.

### 2 Volume Increased

As healthcare utilization increased, the number of medical and dental claims submitted rose approximately 20 percent. For both industries the increase in volume was driven by an increase in electronic submissions.

### 3 Spending Increased – Highest Increase among Transactions

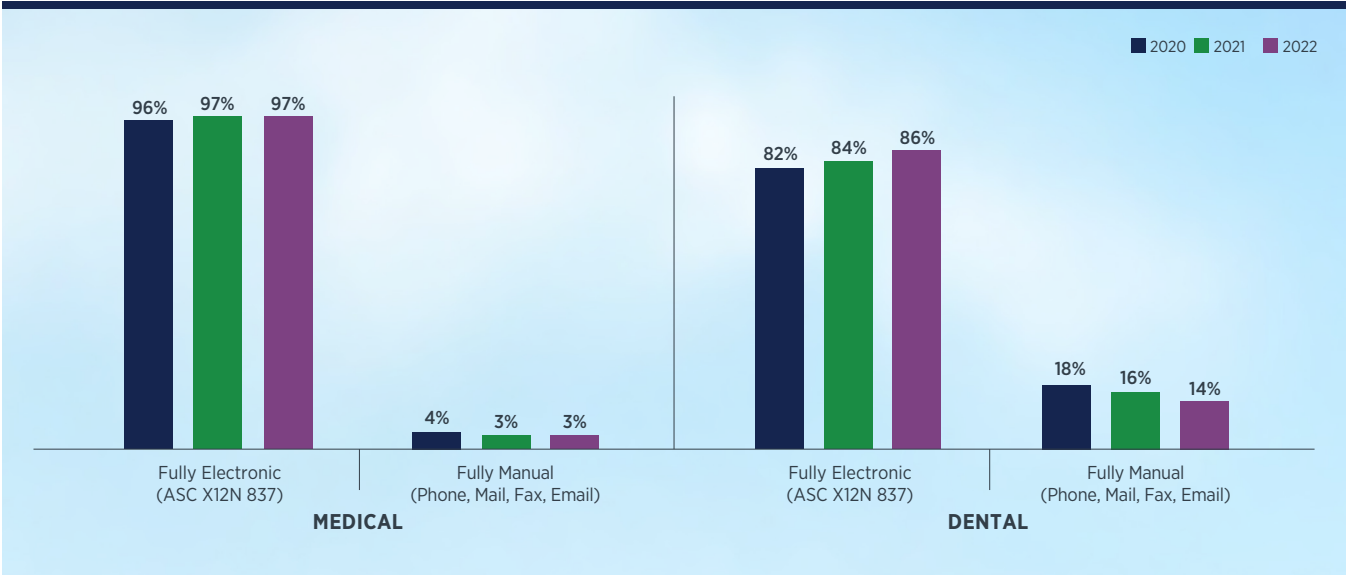
Spending on claim submissions increased 83 percent to \$11.1 billion for the medical industry and 42 percent to \$964 million for the dental industry. The increase in spend for both industries was a result of higher patient encounters and providers spending more time conducting electronic submissions as new staff gained experience with requirements and systems. The spend associated with submitting claims accounted for 20 percent of the annual medical spend and 18 percent of the annual dental spend.

### 4 Cost Savings Opportunities Increased

For the medical industry, the increase in cost savings was driven by a widening gap between manual and electronic costs for providers. The cost savings opportunity for the dental industry increased minimally.

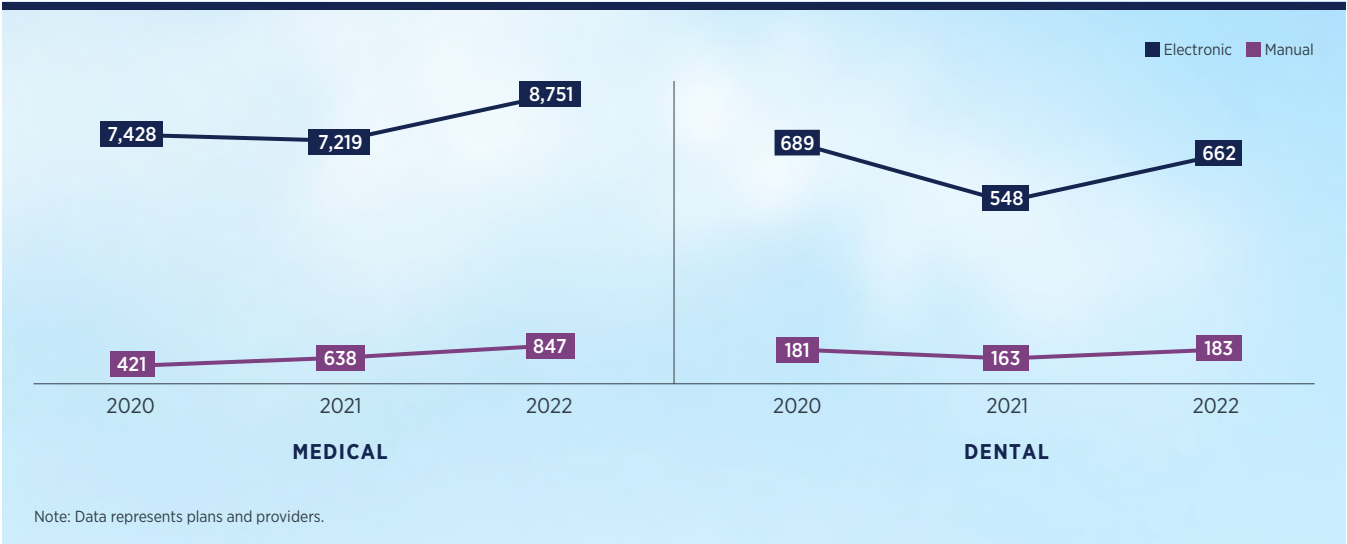
ADOPTION

Medical and Dental Plan Adoption of Claim Submission  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Claim Submission by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Claim Submission: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



COST SAVINGS OPPORTUNITY

Electronic Claim Submission: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Claim Submission: Time Savings Opportunity



**Launching in 2023: Development of New Health Care Claims Operating Rules**

CAQH CORE participants prioritized operating rule development to support the health care claims submission process in their 2021 annual survey. In response, CAQH CORE launched an environmental scan and convened focus groups in 2022 to identify, refine and prioritize operating rule opportunity areas for future rule development. The research identified opportunity areas including claim rejection and notification reporting, value-based payments, telehealth, patient data sharing and X12-to-HL7 FHIR translation. CAQH CORE continues to evaluate these areas with a plan to launch rule development efforts on priority topics in early 2023.

# Attachments

## Definition

Additional information submitted with claims for payment, claim appeals or prior authorization, such as medical records to support a claim or to explain the need for a procedure or service. Transaction Standards: ASC X12N 275, HL7 CDA.

## Transaction Highlights

### 1 Adoption Increased, Lowest Level for Medical

Lack of a federally mandated electronic standard continued to influence adoption as health plans, providers and vendors are hesitant to invest in automated solutions without official guidance. Despite an increase in adoption, electronic adoption remains the lowest for the medical industry (24 percent). The dental industry experienced a larger increase in electronic adoption compared to the medical industry, 12 percentage points, as dental procedures increased and dental claims, in general, require more supporting documentation than medical.

### 2 Medical Volume Decreased Slightly, Dental Increased

The number of attachments required for prior authorizations and claims continued to decline as plans reduced the number of supporting documents required. Volume increased for the dental industry as more dental procedures were being conducted, triggering the need for attachments to verify services being requested or billed.

### 3 Medical Spending Increased

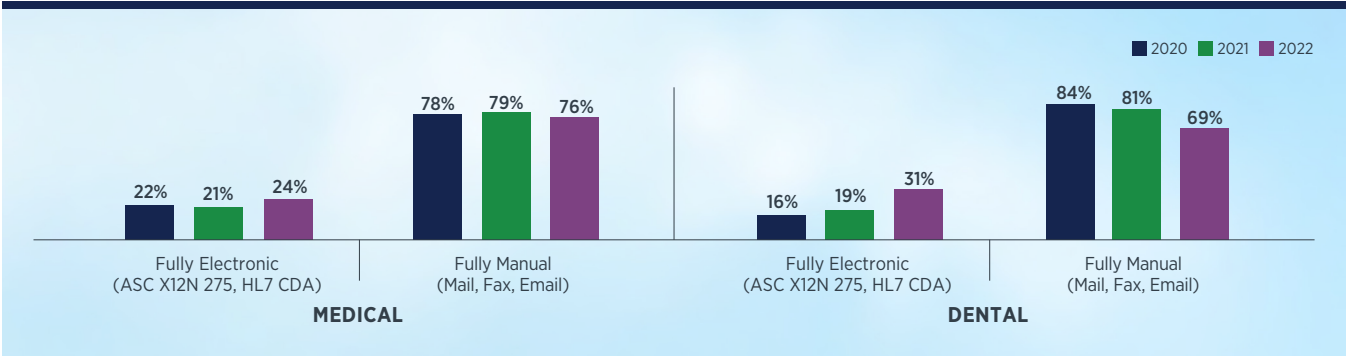
Workforce shortages and hiring difficulties resulted in increased practice spend as newly hired staff drove up the time spent exchanging supporting documentation with health plans.

### 4 Medical Cost Savings Opportunity Declined

The cost savings opportunity associated with switching from manual to electronic attachments experienced the only decline among the transactions. Lower manual volume and plan costs, coupled with higher adoption, drove the drop in cost savings opportunity.

ADOPTION

Medical Plan Adoption of Attachments  
2020-2022 CAQH Index



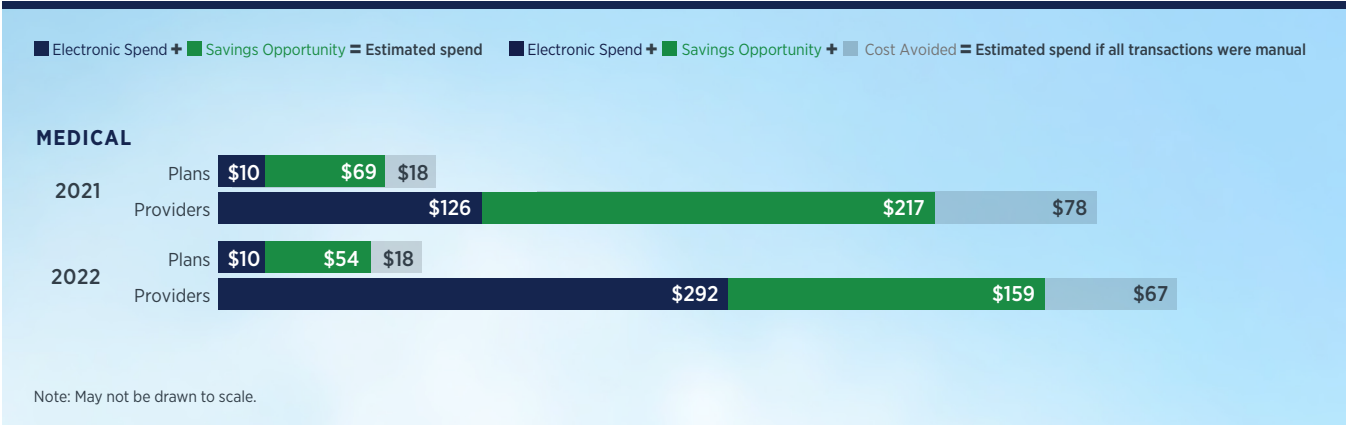
VOLUME

Estimated National Volume of Attachments by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Attachments: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



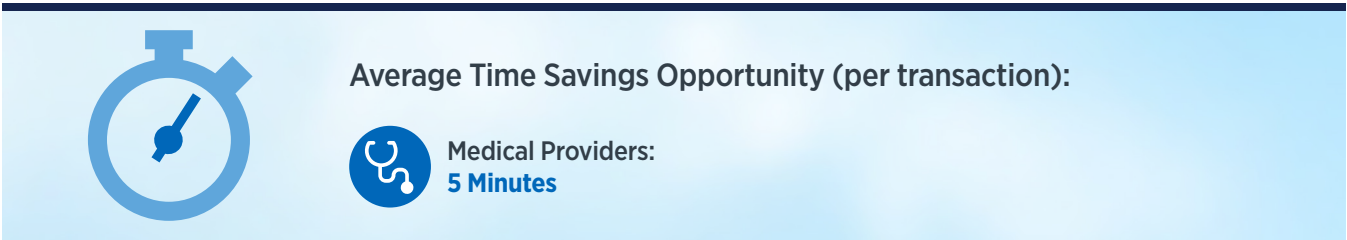
COST SAVINGS OPPORTUNITY

Electronic Attachments: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Attachments: Time Savings Opportunity



### CMS Proposes Standards for “Health Care Attachments” Transactions

In December 2022, CMS released a proposed rule, “Adoption of Standards for Health Care Attachments Transactions and Electronic Signatures, and Modification to Referral Certification and Authorization Transaction Standard (CMS-0053-P).” If finalized, the proposed rule would adopt long-awaited standards for attachments under HIPAA to support health care claims and prior authorization transactions. In the proposed rule, CMS notes that the Secretary of HHS is required to adopt associated operating rules in addition to establishing a transaction standard.

The National Committee on Vital Health Statistics (NCVHS), in early 2023, held a hearing and solicited industry comments on a set of proposed CAQH CORE Operating Rules for federal adoption including rules for attachments. The CAQH CORE Attachments Operating Rules establish infrastructure and data content requirements for attachments, or additional documentation, sent to support a prior authorization request or health care claims submission. The rules are standard agnostic, supporting a variety of standards including X12 275, FHIR Resources, HL7 CCDAs, etc. Specifically, the rules focus on:

- Infrastructure requirements that align with existing CORE Infrastructure Rules to uniformly send electronic attachments.
- Simplified re-association of a claim or prior authorization to an attachment, reducing the need for manual intervention.
- Faster coverage decision to support patient care by enabling consistent, electronic exchange of needed supporting documentation.

NCVHS will use industry feedback from the hearing and comment period to make a recommendation to HHS on whether to adopt the proposed operating rules.

# Acknowledgements

## Definition

A health plan’s response to a provider or provider’s clearinghouse that they received information from the provider or clearinghouse; or a confirmation received by a provider that the information shared with a health plan has been rejected or accepted. Transaction Standard: ASC X12N 277CA/999.

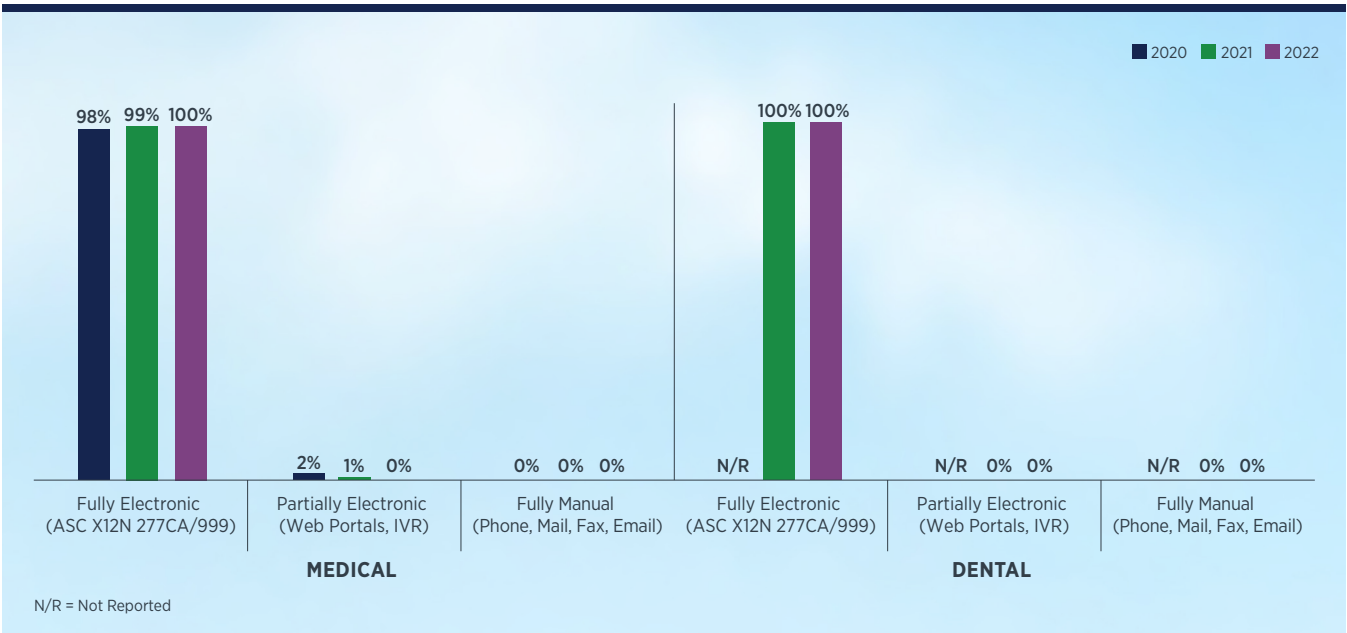
## Transaction Highlights

### 1 Fully Automated

Acknowledgements, which confirm receipt of information, are fully automated as health plans have implemented auto-generated confirmations. No manual resources are needed to complete an acknowledgement—a benefit as volume continues to rise.

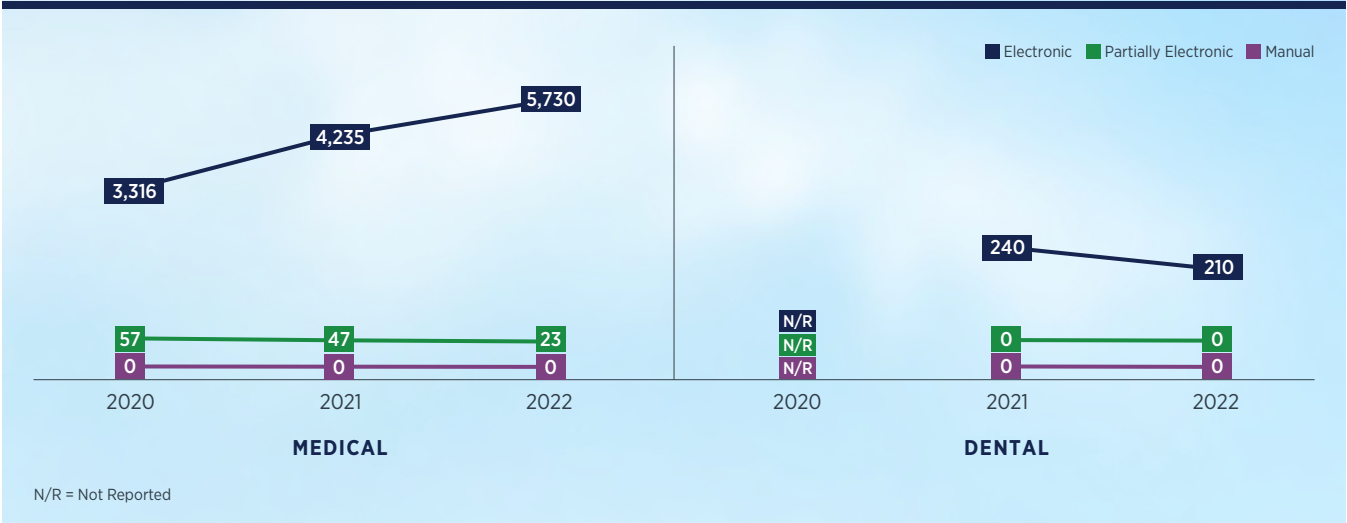
## ADOPTION

### Medical and Dental Plan Adoption of Acknowledgements 2020-2022 CAQH Index



VOLUME

Estimated National Volume of Acknowledgements by Mode  
2020-2022 CAQH Index (in millions)



# Coordination of Benefits

## Definition

Claims that are sent to secondary payers with explanation of payment information from the primary payer to determine remaining payment responsibilities. HIPAA Transaction Standard: ASC X12N 837.

## Transaction Highlights

For the first time, dental coordination of benefits can be reported.

### 1 Medical Adoption Increased

After dropping slightly last year, medical adoption of coordination of benefits (COB) increased to 91 percent, among the most automated administrative tasks. Since 2015, COB electronic adoption has increased by 42 percentage points—the highest electronic adoption increase for any transaction in the last ten years. In contrast, dental adoption is at 52 percent in its first reporting year.

### 2 Volume Increased

The overall rise in medical volume was driven by an increase in electronic COBs while manual volume continued to decrease. More utilization resulted in the need to conduct more COBs to identify patient coverage and help avoid inaccurate or late payments.

### 3 Spending Increased – Lowest Spend

While spending rose 25 percent to \$65 million, it accounts for less than one percent of the total annual medical spend. The increase in spend can be attributed to higher manual costs which countered the decrease in manual volume. Higher manual costs may be due to inexperienced staff and the need to perform additional steps to identify coverage information as job changes continued in 2021.<sup>25</sup>

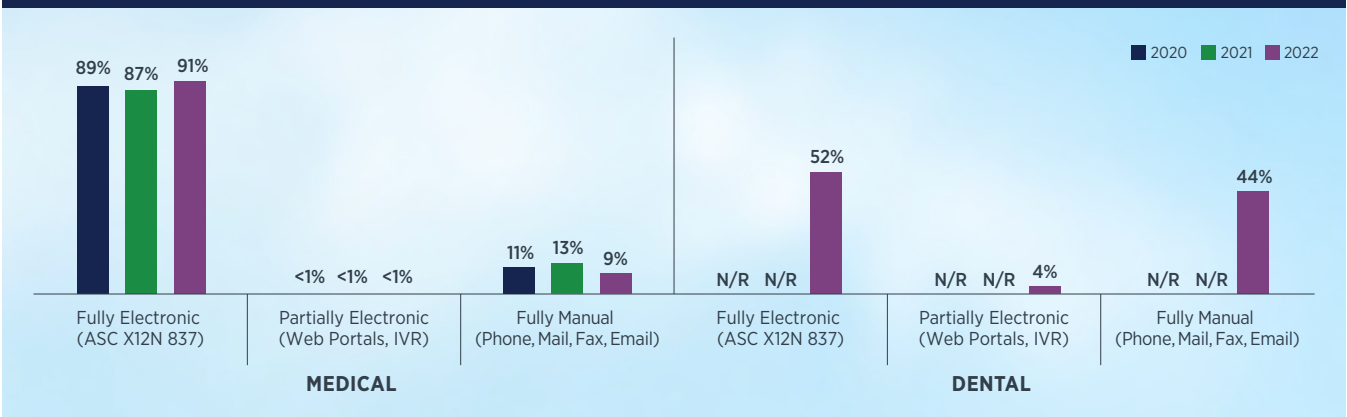
### 4 Cost Savings Opportunity Increased

The gap in cost between conducting a manual and electronic COB grew as the manual cost to conduct a COB increased at a greater rate than the increase in electronic costs.

<sup>25</sup> “Majority of workers who quit a job in 2021 cite low pay, no opportunities for advancement, feeling disrespected,” Pew Research Center, March 9, 2022, <https://www.pewresearch.org/fact-tank/2022/03/09/majority-of-workers-who-quit-a-job-in-2021-cite-low-pay-no-opportunities-for-advancement-feeling-disrespected/>.

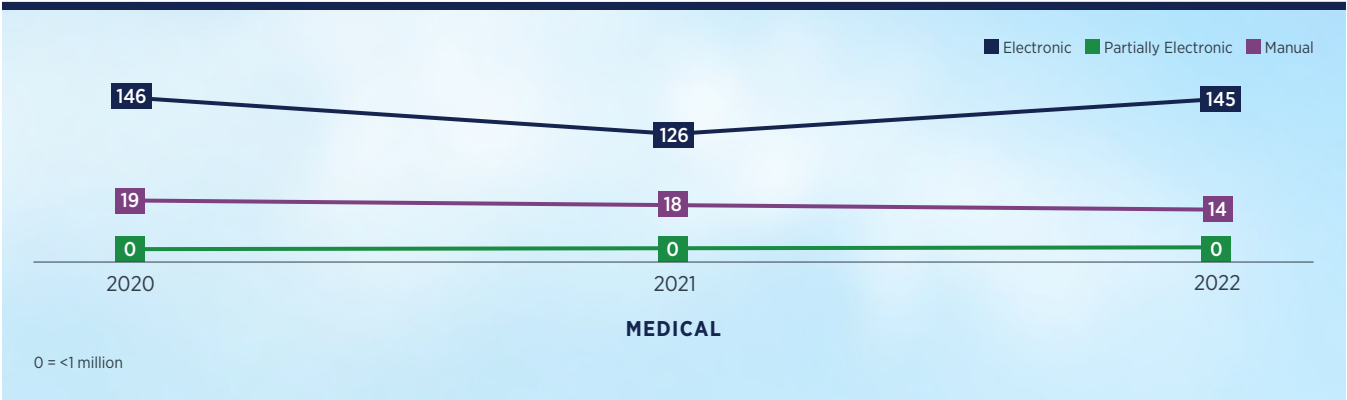
ADOPTION

Medical and Dental Plan Adoption of Coordination of Benefits  
2020-2022 CAQH Index



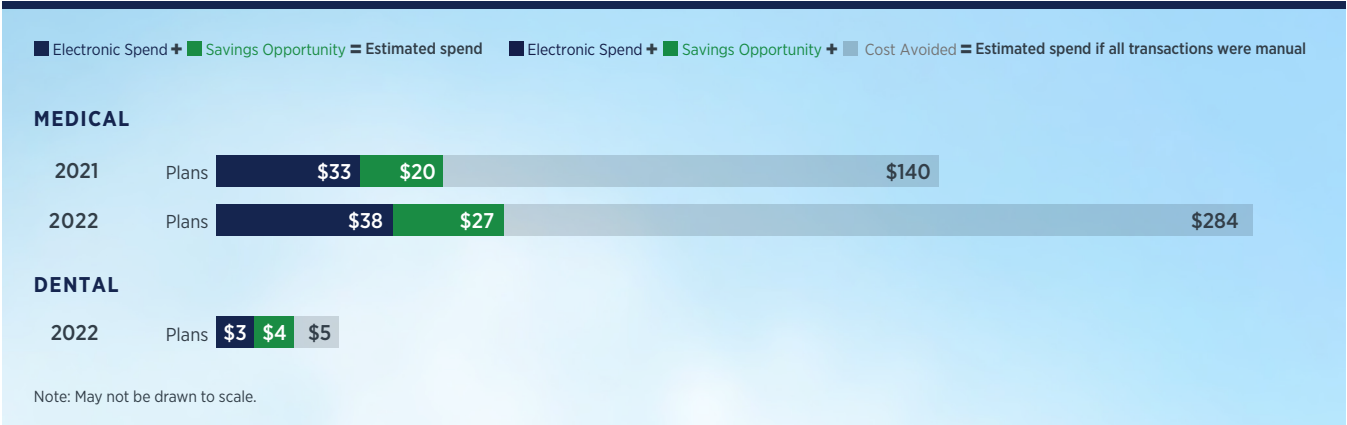
VOLUME

Estimated National Volume of Coordination of Benefits by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Coordination of Benefits: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



COST SAVINGS OPPORTUNITY

Electronic Coordination of Benefits: Cost Savings Opportunity



# Claim Status Inquiry

## Definition

An inquiry from a provider to a health plan to determine the status of a healthcare claim or a response from the health plan. HIPAA Transaction Standard: ASC X12N 276/277.

## Transaction Highlights

### 1 Adoption Increased

The medical and dental industries experienced an increase in electronic adoption. Medical adoption increased after a decrease last year brought on by complicating factors, such as new and emerging telemedicine requirements and codes, which resulted in more manual work for plans and providers.

### 2 Medical Volume Increased, Dental Decreased

After decreasing in 2021, medical volume increased significantly, 56 percent, driven by an increase in utilization. The increase in doctor's appointments resulted in more claims being processed, thus more inquiries conducted. Conversely, volume decreased for the dental industry. The decrease in volume occurred after dental volume increased in 2020 as dental providers were "catching up" on outstanding claims early in the pandemic while offices were closed.

### 3 Medical Spending Increased, Dental Decreased

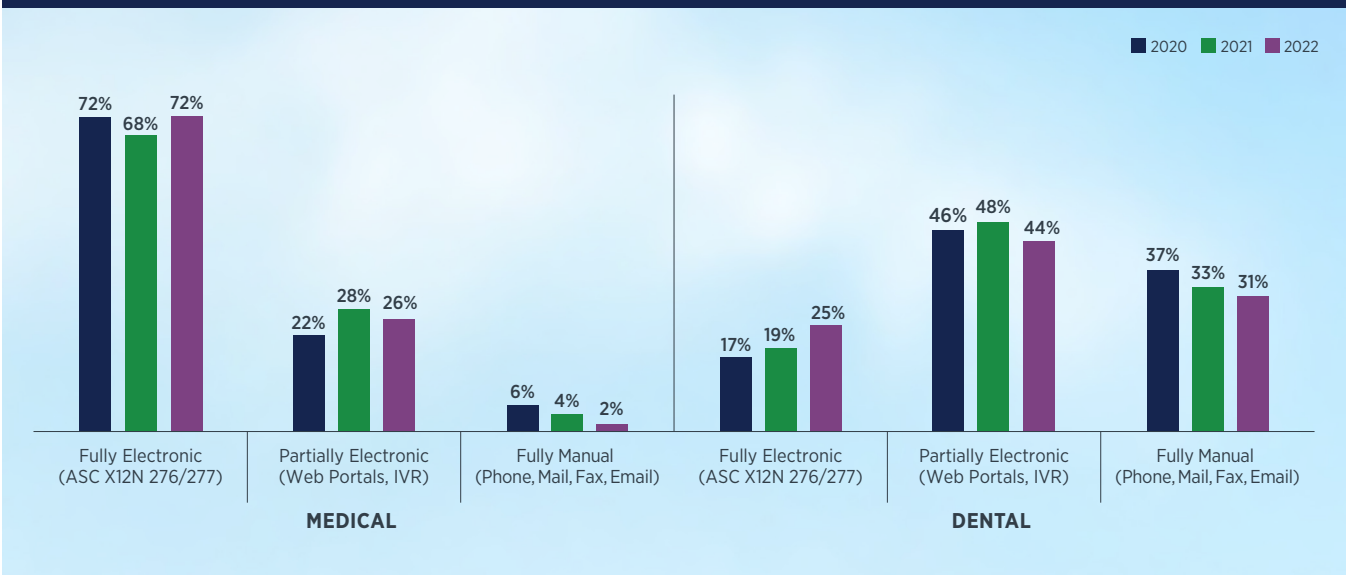
Medical spending on claim status inquiries experienced the second highest increase (50 percent) among the administrative tasks. Spending was impacted primarily by the increase in providers using portals to conduct inquiries and the costs associated with this. This spend accounted for 13 percent of the total annual medical spend. Dental spending decreased slightly as overall volume dropped.

### 4 Medical Cost Savings Opportunity Increased, Dental Decreased

The cost savings associated with switching from manual to electronic inquiries increased for the medical industry and represents 16 percent of the total cost savings opportunity, the second largest. And while the cost savings opportunity for the dental industry decreased, it still accounts for 24 percent of the total cost savings opportunity—also the second largest.

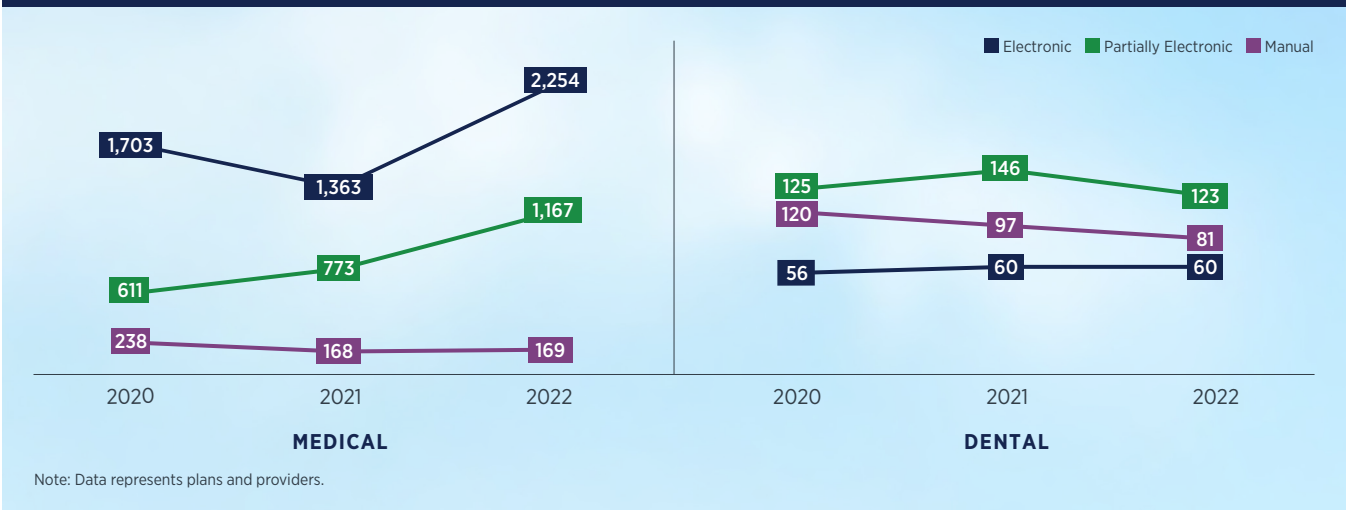
ADOPTION

Medical and Dental Plan Adoption of Claim Status Inquiry  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Claim Status Inquiry by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Claim Status Inquiry: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



COST SAVINGS OPPORTUNITY

Electronic Claim Status Inquiry: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Claim Status Inquiry: Time Savings Opportunity



# Claim Payment

## Definition

An electronic funds transfer (EFT) from a health plan's bank to a provider's bank; including payment and data specific to the payment. HIPAA Transaction Standard: NACHA Corporate Credit or Deposit Entry with Addenda Record (CCD+).

## Transaction Highlights

### 1 Medical Adoption Decreased, Dental Increased

For the medical industry, adoption decreased one percentage point—the only transaction experiencing a decrease. Conversely, dental adoption increased one percentage point which was the lowest increase in dental adoption.

### 2 Medical Volume Decreased, Dental Increased

Claim payment volume decreased for the medical industry after increasing substantially (60 percent) last year as providers reconciled late payments during low utilization. The number of payments was inflated last year due to this behavior and is returning to pre-pandemic levels. Conversely, after decreasing last year, the dental industry experienced an increase in claim payment volume due to higher utilization. The volume increase was driven by greater use of electronic fund transfers (EFTs)—an ongoing industry focus.<sup>26</sup>

### 3 Spending Increased

Despite the decrease in volume, medical providers spent more time processing manual payments, thus increasing costs. Similarly, dental spending increased as the time and cost to conduct manual payments rose for dental providers. As social distancing policies and requirements loosened, providers and staff resumed going to the bank to deposit checks.

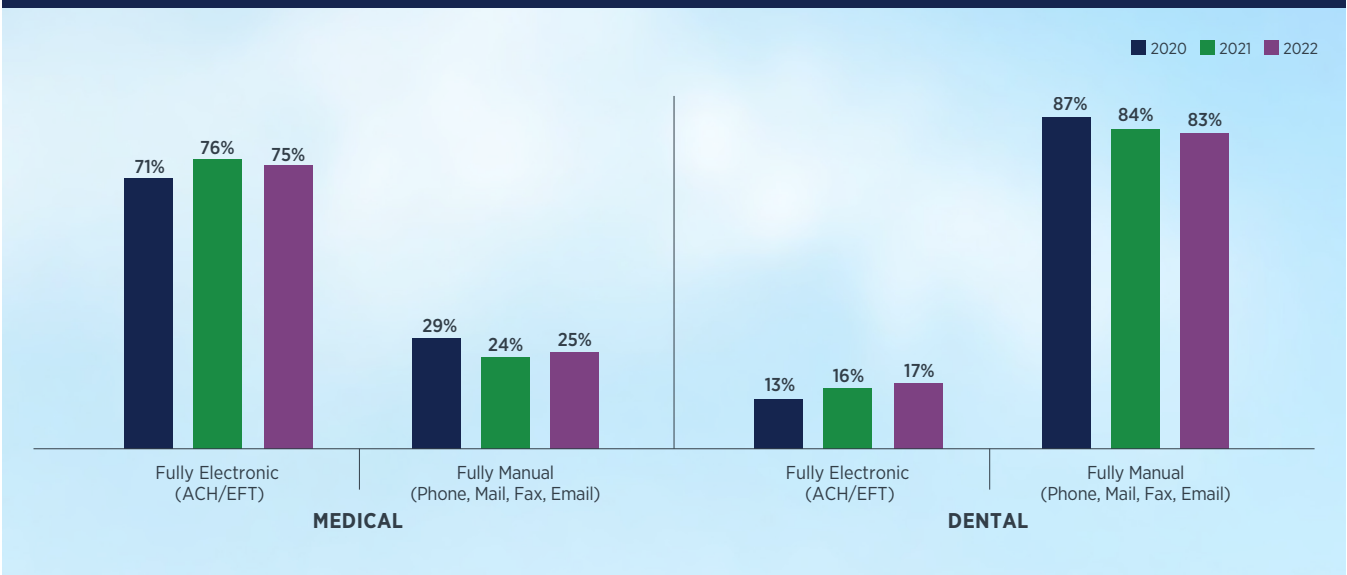
### 4 Cost Savings Opportunities Increased

For both industries, the increase in cost savings potential was due to the increase in cost and time associated with providers using paper checks. While EFTs increased for the dental industry, the cost to conduct a manual transaction countered any savings.

<sup>26</sup> "NACHA Reports ACH Network Growth of 7.1% in First Quarter 2020; Expects Slowdown Due to COVID-19," News, NACHA website, April 8, 2020, <https://www.nacha.org/news/nacha-reports-ach-network-growth-71-first-quarter-2020-expects-slowdown-due-covid-19>.

ADOPTION

Medical and Dental Plan Adoption of Claim Payment  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Claim Payment by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Claim Payment: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



COST SAVINGS OPPORTUNITY

Electronic Claim Payment: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Claim Payment: Time Savings Opportunity



# Remittance Advice

## Definition

The transmission of explanation of benefits or remittance advice from a health plan to a provider explaining a payment. HIPAA Transaction Standard: ASC X12N 835.

## Transaction Highlights

### 1 Substantial Increase in Adoption

The medical and dental industries experienced large increases in adoption, 19 and 11 percentage points, respectively. This increase was the largest for the medical industry and second largest for the dental industry. This growth contributed to a 40 percentage point increase in electronic adoption for the medical industry over the past ten years and a 23 percentage point increase for the dental industry over the past six years.<sup>27</sup> The increase in dental adoption may be due to continued promotion of electronic remittance advices (ERAs) by the American Dental Association (ADA).<sup>28</sup>

### 2 Medical Volume Decreased, Dental Increased

Medical volume decreased as the practice of posting duplicate remittance advices on health plan portals and through ERAs seems to be declining as evidenced by the large decrease in portal use (55 percent). Unlike the medical industry, the dental industry appeared to be posting duplicate remittance advices as portal and ERA use increased. Duplicate postings offer dental providers various opportunities to access payment information.

### 3 Spending Increased, Largest Increase for Dental

The increase in provider costs impacted the growth in medical spend. Medical providers and staff, several newly hired and inexperienced, spent more time accessing information resulting in increased costs. The costs associated with remittance advices also increased for the dental industry and accounted for 24 percent of the total annual dental spend, the highest spend along with eligibility and benefit verifications. Higher volume and costs for dental providers contributed to higher spend.

### 4 Cost Savings Opportunities Increased

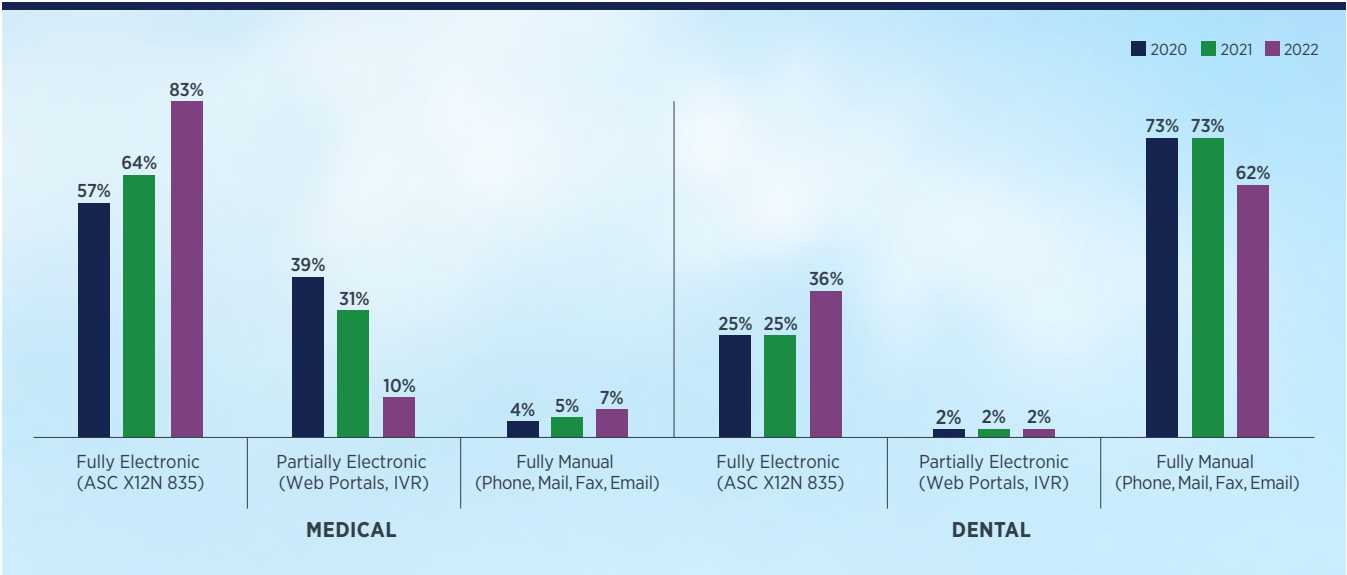
For both industries, the increase in cost savings by switching from manual remittance advices to ERAs is due to the increase in provider manual costs as providers spent more time conducting manual remittance advices.

<sup>27</sup> The Index began reporting on remittance advice for the dental industry in 2017.

<sup>28</sup> American Dental Association, 3rd Administrative Efficiencies Summit, Chicago, IL, September 2022.

ADOPTION

Medical and Dental Plan Adoption of Remittance Advice  
2020-2022 CAQH Index



VOLUME

Estimated National Volume of Remittance Advice by Mode  
2020-2022 CAQH Index (in millions)



SPEND & SAVINGS

Remittance Advice: How Much is Spent and Saved With Full Adoption?  
2021-2022 CAQH Index (in millions)



COST SAVINGS OPPORTUNITY

Electronic Remittance Advice: Cost Savings Opportunity



TIME SAVINGS OPPORTUNITY

Electronic Remittance Advice: Time Savings Opportunity

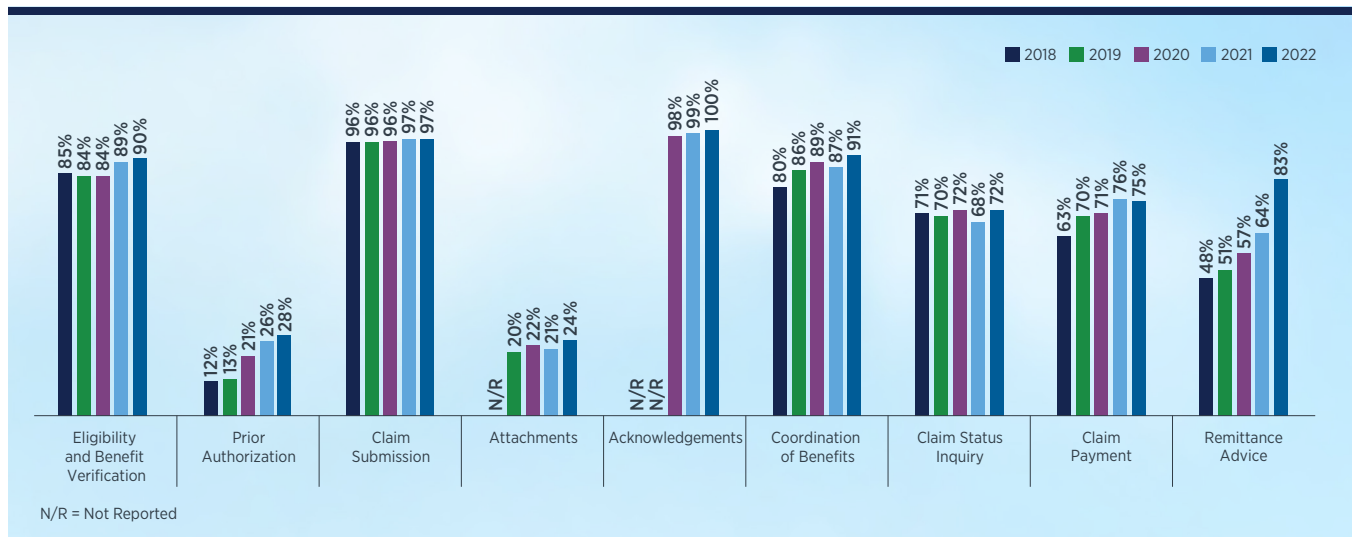


# Overall Key Metrics

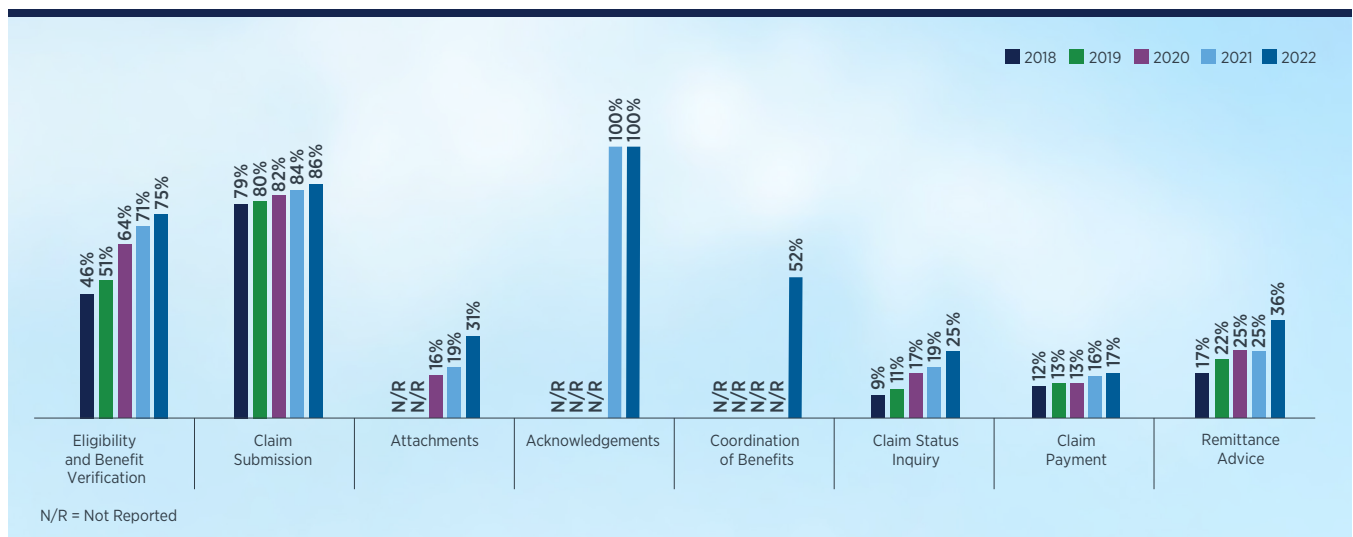
The CAQH Index benchmarks medical and dental industry adoption, volume, cost savings opportunities and spend for administrative transactions. Trending these metrics helps the industry measure progress towards an automated workflow while identifying areas for improvement.

## ADOPTION

### Medical Plan Adoption of Fully Electronic Administrative Transactions 2018-2022 CAQH Index

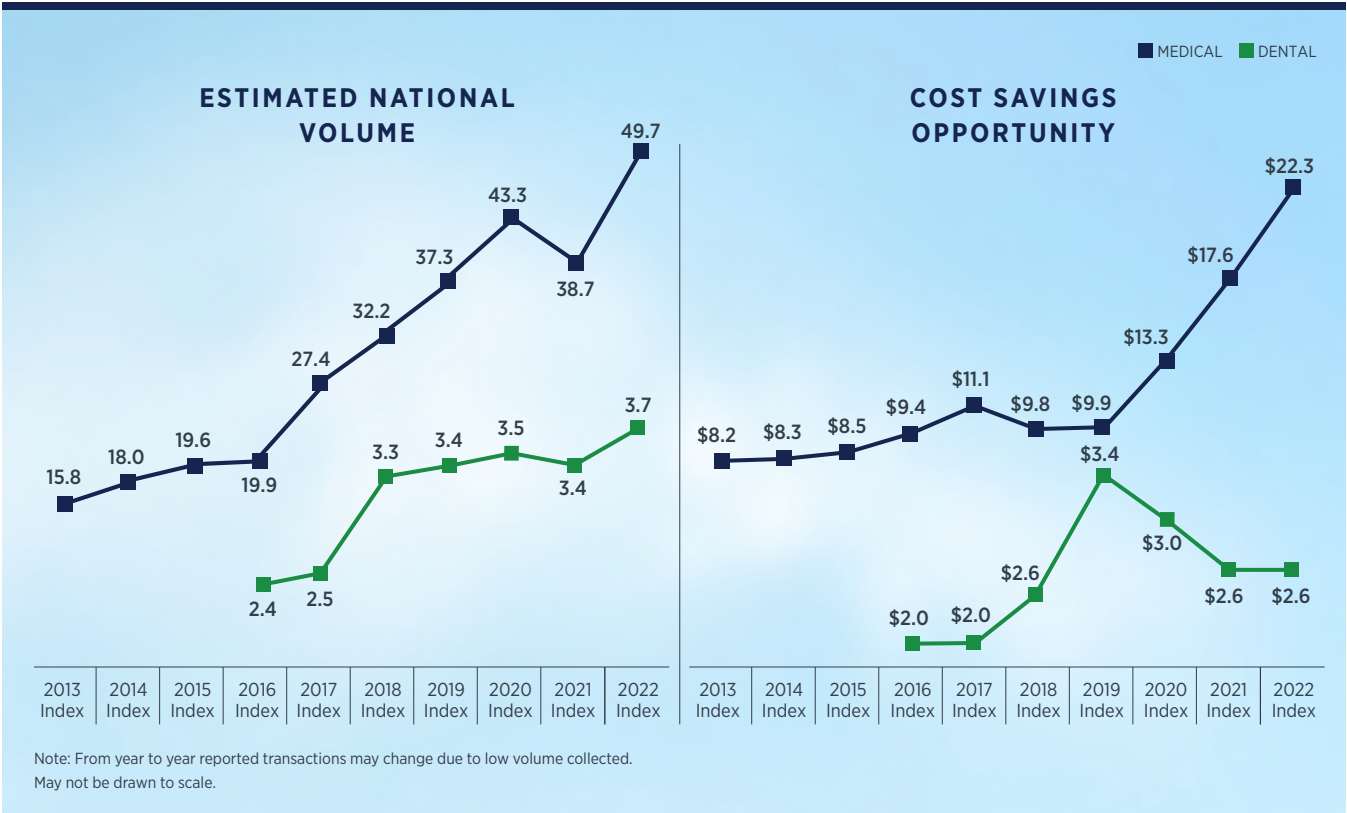


### Dental Plan Adoption of Fully Electronic Administrative Transactions 2018-2022 CAQH Index



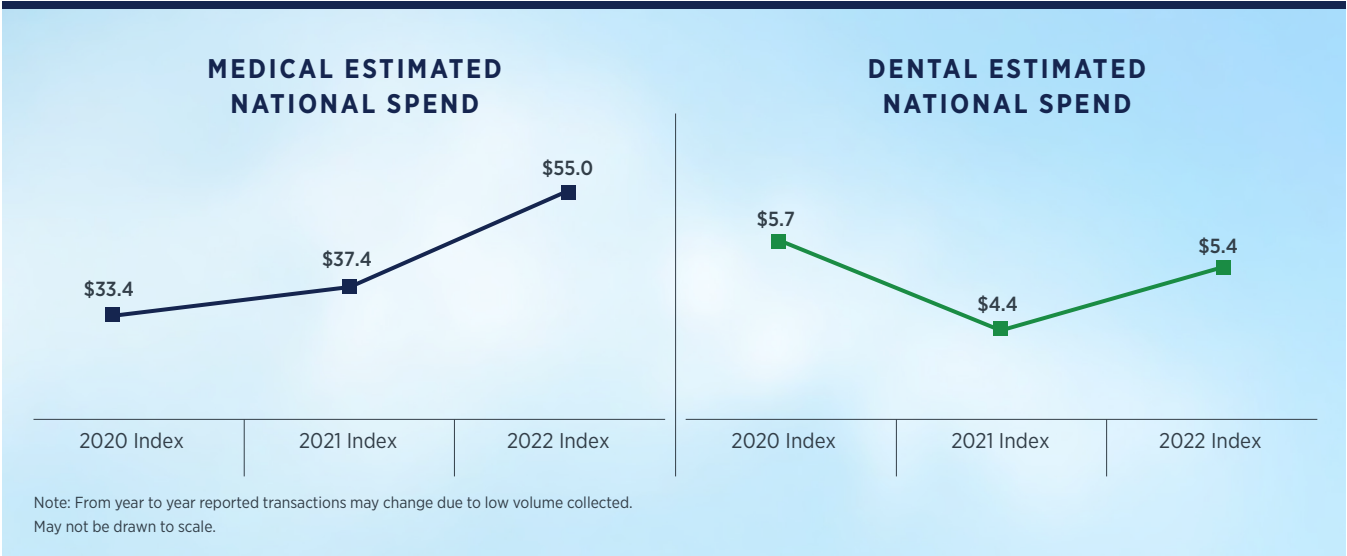
# VOLUME

## Medical and Dental Industry Estimated National Volume and Cost Savings Opportunity 2013-2022 CAQH Index (in billions)



# SPEND & SAVINGS

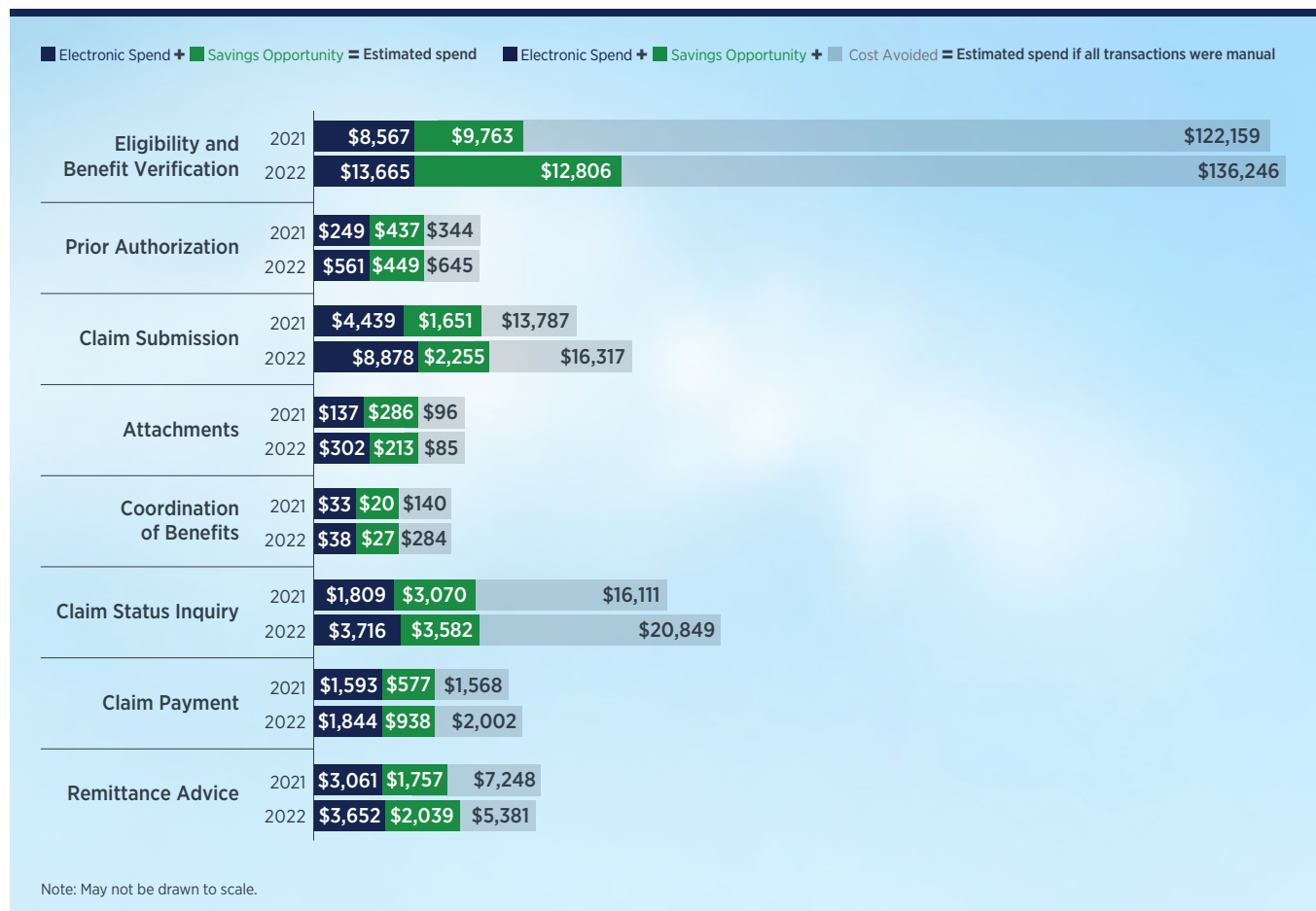
## Medical and Dental Industry Estimated National Spend 2020-2022 CAQH Index (in billions)



## Medical and Dental Industry Estimated National Spend and Savings 2021-2022 CAQH Index (in billions)



## Medical Industry Estimated National Spend and Savings by Transaction 2021-2022 CAQH Index (in millions)



# Dental Industry Estimated National Spend and Savings by Transaction

## 2021-2022 CAQH Index (in millions)

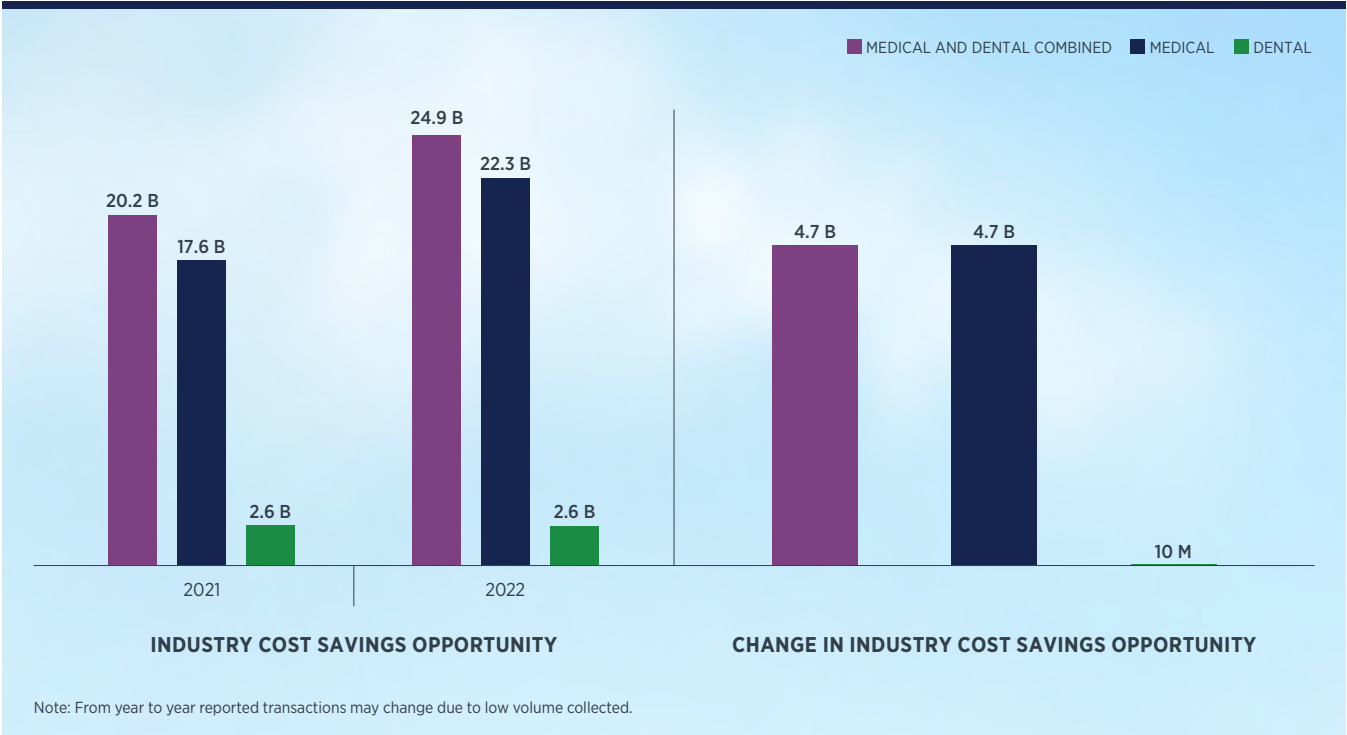


# Medical and Dental Industry Estimated National Cost Avoided

## 2020-2022 CAQH Index (in billions)



Medical and Dental Industry Estimated Cost Savings Opportunity and Year-Over-Year Change  
2021-2022 CAQH Index



# Cost Savings Opportunity Tables

The tables listed below include, by mode, the average cost per transaction, estimated national volume and cost savings opportunities for medical and dental plans and providers. Understanding the cost and volume of administrative transactions along with the savings associated with switching to fully electronic transactions helps organizations identify and target pain points.

| Average Cost and Savings Opportunity per Transaction by Mode, Medical, 2022 CAQH Index |            |           |               |               |                               |                                   |                                   |
|----------------------------------------------------------------------------------------|------------|-----------|---------------|---------------|-------------------------------|-----------------------------------|-----------------------------------|
| Transaction                                                                            | Mode       | Plan Cost | Provider Cost | Industry Cost | Plan Cost Savings Opportunity | Provider Cost Savings Opportunity | Industry Cost Savings Opportunity |
| Eligibility and Benefit Verification                                                   | Manual     | \$ 4.50   | \$ 8.36       | \$ 12.86      | \$ 4.46                       | \$ 7.32                           | \$ 11.78                          |
|                                                                                        | Partial    | \$ 0.04   | \$ 3.77       | \$ 3.81       | \$ 0.00                       | \$ 2.73                           | \$ 2.73                           |
|                                                                                        | Electronic | \$ 0.04   | \$ 1.04       | \$ 1.08       |                               |                                   |                                   |
| Prior Authorization                                                                    | Manual     | \$ 3.72   | \$ 10.80      | \$ 14.52      | \$ 3.67                       | \$ 5.93                           | \$ 9.60                           |
|                                                                                        | Partial    | \$ 0.05   | \$ 7.19       | \$ 7.24       | \$ 0.00                       | \$ 2.32                           | \$ 2.32                           |
|                                                                                        | Electronic | \$ 0.05   | \$ 4.87       | \$ 4.92       |                               |                                   |                                   |
| Claim Submission                                                                       | Manual     | \$ 1.03   | \$ 4.69       | \$ 5.72       | \$ 0.91                       | \$ 2.96                           | \$ 3.87                           |
|                                                                                        | Electronic | \$ 0.12   | \$ 1.73       | \$ 1.85       |                               |                                   |                                   |
| Attachments                                                                            | Manual     | \$ 0.91   | \$ 5.69       | \$ 6.60       | \$ 0.80                       | \$ 2.48                           | \$ 3.28                           |
|                                                                                        | Electronic | \$ 0.11   | \$ 3.21       | \$ 3.32       |                               |                                   |                                   |
| Coordination of Benefits                                                               | Manual     | \$ 2.20   | N/A           | \$ 2.20       | \$ 1.96                       | N/A                               | \$ 1.96                           |
|                                                                                        | Partial    | \$ 0.24   | N/A           | \$ 0.24       | \$ 0.00                       | N/A                               | \$ 0.00                           |
|                                                                                        | Electronic | \$ 0.24   | N/A           | \$ 0.24       |                               |                                   |                                   |
| Claim Status Inquiry                                                                   | Manual     | \$ 4.50   | \$ 11.18      | \$ 15.68      | \$ 4.46                       | \$ 9.15                           | \$ 13.61                          |
|                                                                                        | Partial    | \$ 0.04   | \$ 5.23       | \$ 5.27       | \$ 0.00                       | \$ 3.20                           | \$ 3.20                           |
|                                                                                        | Electronic | \$ 0.04   | \$ 2.03       | \$ 2.07       |                               |                                   |                                   |
| Claim Payment                                                                          | Manual     | \$ 0.57   | \$ 5.50       | \$ 6.07       | \$ 0.48                       | \$ 3.25                           | \$ 3.73                           |
|                                                                                        | Electronic | \$ 0.09   | \$ 2.25       | \$ 2.34       |                               |                                   |                                   |
| Remittance Advice                                                                      | Manual     | \$ 0.53   | \$ 6.14       | \$ 6.67       | \$ 0.45                       | \$ 4.02                           | \$ 4.47                           |
|                                                                                        | Partial    | \$ 0.08   | \$ 5.76       | \$ 5.84       | \$ 0.00                       | \$ 3.64                           | \$ 3.64                           |
|                                                                                        | Electronic | \$ 0.08   | \$ 2.12       | \$ 2.20       |                               |                                   |                                   |

N/A = Not Applicable

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

## Average Cost and Savings Opportunity per Transaction by Mode, Dental, 2022 CAQH Index

| Transaction                          | Mode       | Plan Cost | Provider Cost | Industry Cost | Plan Cost Savings Opportunity | Provider Cost Savings Opportunity | Industry Cost Savings Opportunity |
|--------------------------------------|------------|-----------|---------------|---------------|-------------------------------|-----------------------------------|-----------------------------------|
| Eligibility and Benefit Verification | Manual     | \$ 3.23   | \$ 7.11       | \$ 10.34      | \$ 3.21                       | \$ 5.63                           | \$ 8.84                           |
|                                      | Partial    | \$ 0.02   | \$ 3.82       | \$ 3.84       | \$ 0.00                       | \$ 2.34                           | \$ 2.34                           |
|                                      | Electronic | \$ 0.02   | \$ 1.48       | \$ 1.50       |                               |                                   |                                   |
| Claim Submission                     | Manual     | \$ 0.45   | \$ 3.58       | \$ 4.03       | \$ 0.35                       | \$ 2.05                           | \$ 2.40                           |
|                                      | Electronic | \$ 0.10   | \$ 1.53       | \$ 1.63       |                               |                                   |                                   |
| Coordination of Benefits             | Manual     | \$ 0.39   | N/A           | \$ 0.39       | \$ 0.28                       | N/A                               | \$ 0.28                           |
|                                      | Partial    | \$ 0.11   | N/A           | \$ 0.11       | \$ 0.00                       | N/A                               | \$ 0.00                           |
|                                      | Electronic | \$ 0.11   | N/A           | \$ 0.11       |                               |                                   |                                   |
| Claim Status Inquiry                 | Manual     | \$ 3.23   | \$ 9.30       | \$ 12.53      | \$ 3.21                       | \$ 7.42                           | \$ 10.63                          |
|                                      | Partial    | \$ 0.02   | \$ 4.85       | \$ 4.87       | \$ 0.00                       | \$ 2.97                           | \$ 2.97                           |
|                                      | Electronic | \$ 0.02   | \$ 1.88       | \$ 1.90       |                               |                                   |                                   |
| Claim Payment                        | Manual     | \$ 0.23   | \$ 3.07       | \$ 3.30       | \$ 0.22                       | \$ 1.54                           | \$ 1.76                           |
|                                      | Electronic | \$ 0.01   | \$ 1.53       | \$ 1.54       |                               |                                   |                                   |
| Remittance Advice                    | Manual     | \$ 0.22   | \$ 3.45       | \$ 3.67       | \$ 0.20                       | \$ 1.77                           | \$ 1.97                           |
|                                      | Partial    | \$ 0.02   | \$ 3.40       | \$ 3.42       | \$ 0.00                       | \$ 1.72                           | \$ 1.72                           |
|                                      | Electronic | \$ 0.02   | \$ 1.68       | \$ 1.70       |                               |                                   |                                   |

N/A = Not Applicable

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

## Estimated National Volume and Cost Savings Opportunity by Mode, Medical, 2022 CAQH Index

| Transaction                                 | Mode              | Plan National Volume | Provider National Volume | Plan National Cost Savings Opportunity | Provider National Cost Savings Opportunity | Industry National Cost Savings Opportunity |
|---------------------------------------------|-------------------|----------------------|--------------------------|----------------------------------------|--------------------------------------------|--------------------------------------------|
|                                             |                   | (in millions)        |                          | (in millions \$)                       |                                            |                                            |
| <b>Eligibility and Benefit Verification</b> | Manual            | 205                  | 364                      | \$ 914                                 | \$ 11,892                                  | \$ 12,806                                  |
|                                             | Partial           | 1,088                | 3,380                    |                                        |                                            |                                            |
|                                             | Electronic        | 11,360               | 8,909                    |                                        |                                            |                                            |
| <b>Prior Authorization</b>                  | Manual            | 38                   | 28                       | \$ 139                                 | \$ 310                                     | \$ 449                                     |
|                                             | Partial           | 44                   | 62                       |                                        |                                            |                                            |
|                                             | Electronic        | 32                   | 24                       |                                        |                                            |                                            |
| <b>Claim Submission</b>                     | Manual            | 123                  | 724                      | \$ 112                                 | \$ 2,143                                   | \$ 2,255                                   |
|                                             | Electronic        | 4,676                | 4,075                    |                                        |                                            |                                            |
| <b>Attachments</b>                          | Manual            | 68                   | 64                       | \$ 54                                  | \$ 159                                     | \$ 213                                     |
|                                             | Electronic        | 22                   | 27                       |                                        |                                            |                                            |
| <b>Acknowledgements</b>                     | Manual            | 0                    | N/R                      | N/R                                    | N/R                                        | N/R                                        |
|                                             | Partial           | 23                   | N/R                      |                                        |                                            |                                            |
|                                             | Electronic        | 5,730                | N/R                      |                                        |                                            |                                            |
| <b>Coordination of Benefits</b>             | Manual            | 14                   | N/A                      | \$ 27                                  | N/A                                        | \$ 27                                      |
|                                             | Partial           | *                    | N/A                      |                                        |                                            |                                            |
|                                             | Electronic        | 145                  | N/A                      |                                        |                                            |                                            |
| <b>Claim Status Inquiry</b>                 | Manual            | 43                   | 126                      | \$ 192                                 | \$ 3,390                                   | \$ 3,582                                   |
|                                             | Partial           | 468                  | 699                      |                                        |                                            |                                            |
|                                             | Electronic        | 1,284                | 970                      |                                        |                                            |                                            |
| <b>Claim Payment</b>                        | Manual            | 200                  | 259                      | \$ 96                                  | \$ 842                                     | \$ 938                                     |
|                                             | Electronic        | 589                  | 529                      |                                        |                                            |                                            |
| <b>Remittance Advice</b>                    | Manual            | 126                  | 120                      | \$ 57                                  | \$ 1,982                                   | \$ 2,039                                   |
|                                             | Partial           | 163                  | 412                      |                                        |                                            |                                            |
|                                             | Electronic        | 1,371                | 1,128                    |                                        |                                            |                                            |
| <b>Transaction Total</b>                    | <b>Manual</b>     | <b>817</b>           | <b>1,685</b>             | <b>\$ 1,591</b>                        | <b>\$20,718</b>                            | <b>\$22,309</b>                            |
|                                             | <b>Partial</b>    | <b>1,786</b>         | <b>4,553</b>             |                                        |                                            |                                            |
|                                             | <b>Electronic</b> | <b>25,209</b>        | <b>15,662</b>            |                                        |                                            |                                            |

\* = Transaction volume is less than 1 million

N/A = Not Applicable

N/R = Not Reported

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

## Estimated National Volume and Cost Savings Opportunity by Mode, Dental, 2022 CAQH Index

| Transaction                                 | Mode              | Plan National Volume | Provider National Volume | Plan National Cost Savings Opportunity | Provider National Cost Savings Opportunity | Industry National Cost Savings Opportunity |
|---------------------------------------------|-------------------|----------------------|--------------------------|----------------------------------------|--------------------------------------------|--------------------------------------------|
|                                             |                   | (in millions)        |                          | (in millions \$)                       |                                            |                                            |
| <b>Eligibility and Benefit Verification</b> | Manual            | 25                   | 29                       | \$ 80                                  | \$ 584                                     | \$ 664                                     |
|                                             | Partial           | 75                   | 180                      |                                        |                                            |                                            |
|                                             | Electronic        | 299                  | 191                      |                                        |                                            |                                            |
| <b>Claim Submission</b>                     | Manual            | 59                   | 124                      | \$ 21                                  | \$ 254                                     | \$ 275                                     |
|                                             | Electronic        | 363                  | 299                      |                                        |                                            |                                            |
| <b>Attachments</b>                          | Manual            | 39                   | N/R                      | N/R                                    | N/R                                        | N/R                                        |
|                                             | Electronic        | 17                   | N/R                      |                                        |                                            |                                            |
| <b>Acknowledgements</b>                     | Manual            | 0                    | N/R                      | N/R                                    | N/R                                        | N/R                                        |
|                                             | Partial           | 0                    | N/R                      |                                        |                                            |                                            |
|                                             | Electronic        | 210                  | N/R                      |                                        |                                            |                                            |
| <b>Coordination of Benefits</b>             | Manual            | 13                   | N/A                      | \$ 4                                   | N/A                                        | \$ 4                                       |
|                                             | Partial           | 1                    | N/A                      |                                        |                                            |                                            |
|                                             | Electronic        | 16                   | N/A                      |                                        |                                            |                                            |
| <b>Claim Status Inquiry</b>                 | Manual            | 41                   | 40                       | \$ 132                                 | \$ 490                                     | \$ 622                                     |
|                                             | Partial           | 58                   | 65                       |                                        |                                            |                                            |
|                                             | Electronic        | 33                   | 27                       |                                        |                                            |                                            |
| <b>Claim Payment</b>                        | Manual            | 273                  | 247                      | \$ 60                                  | \$ 380                                     | \$ 440                                     |
|                                             | Electronic        | 57                   | 83                       |                                        |                                            |                                            |
| <b>Remittance Advice</b>                    | Manual            | 261                  | 178                      | \$ 52                                  | \$ 516                                     | \$ 568                                     |
|                                             | Partial           | 10                   | 117                      |                                        |                                            |                                            |
|                                             | Electronic        | 154                  | 131                      |                                        |                                            |                                            |
| <b>Transaction Total</b>                    | <b>Manual</b>     | <b>711</b>           | <b>618</b>               | <b>\$ 349</b>                          | <b>\$ 2,224</b>                            | <b>\$ 2,573</b>                            |
|                                             | <b>Partial</b>    | <b>144</b>           | <b>362</b>               |                                        |                                            |                                            |
|                                             | <b>Electronic</b> | <b>1,149</b>         | <b>731</b>               |                                        |                                            |                                            |

N/A = Not Applicable

N/R = Not Reported

Note: Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Does not include system costs. All participants were asked to report cost for each transaction by the three modes of completion (manual, partial electronic, electronic). For some transactions, partial costs were not reported.

# Methodology

## Introduction

The CAQH Index tracks the industry adoption of electronic administrative transactions over time. It measures industry volume, spend, cost avoided and the cost savings opportunity by switching from conducting partially electronic and manual transactions to using fully electronic transactions. The 2022 CAQH Index is the tenth annual report which collects data from medical and dental plans and providers covering more than half of the insured United States population, according to enrollment reports from the AIS Directory of Health Plans and NADP Dental Health Plan Profiles.<sup>29,30</sup>

## Recruitment

Medical and dental plans and providers were voluntarily recruited to participate in the study using direct outreach through email and telephone, industry conferences, webinars, the CAQH website and social media. CAQH managed the medical and dental plan and provider recruitment, including developing the recruitment list and sending email invitations, while collaborating with NORC at the University of Chicago<sup>31</sup> on the recruitment, data collection and analysis of medical and dental providers.

Plans and providers included those that participated in the CAQH Index previously, as well as additional contacts from plan and provider organizations engaged with other CAQH initiatives. Additionally, NORC contacted, followed up, and updated the legacy contact list and hospital list to recruit additional provider participants. CAQH also partnered with CAQH member organizations, the CAQH Index Advisory Council, the Workgroup for Electronic Data Interchange (WEDI), the American Dental Association (ADA), the American Hospital Association (AHA) and the American Medical Association (AMA) to increase participation in the survey.

All CAQH Index participants receive a benchmark report comparing their data to the aggregate industry results. Medical and dental providers were also offered honorariums to encourage participation in the survey.

## Data Collection

The CAQH Index collected data through a voluntary online survey tool from July to September 2022. A fillable PDF and Excel version of the survey was also offered to participants. Plan and provider data are representative of the 2021 calendar year, January 1 to December 31, 2021.

The medical plan survey collected data on ten administrative transactions and the dental plan survey collected data on nine administrative transactions. The medical plan survey also included supplemental questions regarding:

- Member not found rate for eligibility and benefit verification.
- Number of claim payments paid in bulk.
- Use of delegated/benefit management vendors for utilization management and prior authorizations.
- Interactions with FHIR for Patient Access and Provider Directory APIs.

The medical provider survey collected data on eight administrative transactions and three pharmacy transactions, Prescription/Drug Prior Authorization (NCPDP SCRIPT), Realtime Pharmacy Benefit Prescription Check (NCPDP RTPB) and Formulary and Benefit (NCPDP Standard) while the dental provider survey included six administrative transactions.

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29 AIS Health Data, a Division of Managed Markets Insight and Technology, LLC, AIS's Directory of Health plans: 2020, (2021).

30 National Association of Dental Health Plans, Dental Benefits Report, 2020.

31 NORC at the University of Chicago is an independent research institution that delivers insights and data analysis for government, nonprofits, and businesses. For more information, visit: <https://www.norc.umd.edu/Pages/default.aspx>.

For medical and dental providers, this year's tool included supplemental questions regarding:

- Average cost and time to process Good Faith Estimates (GFE's).
- Use of delegated/benefit management vendors for utilization management and prior authorizations (medical providers only).

The responses to these supplemental questions from plans and providers have provided context for a portion

of the results in this report. Issue briefs on some of these topics may be released later this year.

Additionally, logic checks were embedded in the online survey tool to ensure data reliability and accuracy for all transactions. Logic checks included a prompted error if transaction volumes or times were outside reasonable bounds. For example, if electronic times were three minutes or greater, participants were asked to provide an explanation of the process.

## Overview of Fully Electronic Administrative Transactions Studied, 2022 CAQH Index

| Transaction                                             | Transaction Standard                                               | Description                                                                                                                                                                                                                                                |
|---------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eligibility and Benefit Verification<sup>†</sup></b> | 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 plan and a response from the health plan to the provider. Does not include referrals.                       |
| <b>Prior Authorization</b>                              | ASC X12N 278                                                       | A request from a provider to a health plan to obtain authorization for healthcare services or a response from a health plan for an authorization. Does not include referrals.                                                                              |
| <b>Claim Submission</b>                                 | ASC X12N 837                                                       | A request to obtain payment or transmission of encounter information for the purpose of reporting delivery of healthcare services.                                                                                                                         |
| <b>Attachments</b>                                      | ASC X12N 275, HL7 CDA*                                             | Additional information submitted with claims for payment, claim appeals or prior authorization, such as medical records to support a claim or to explain the need for a procedure or service.                                                              |
| <b>Attachments (VBP)</b>                                |                                                                    | Medical information or quality measure documents that are submitted with payment under value-based payment (VBP) arrangements.                                                                                                                             |
| <b>Acknowledgements</b>                                 | ASC X12N 277CA/999                                                 | A health plan's response to a provider or provider's clearinghouse that they received information from the provider or clearinghouse; or confirmation received by a provider that the information shared with a health plan has been rejected or accepted. |
| <b>Coordination of Benefits</b>                         | ASC X12N 837                                                       | Claims that are sent to secondary payers with explanation of payment information from the primary payer to determine remaining payment responsibilities.                                                                                                   |
| <b>Claim Status Inquiry<sup>†</sup></b>                 | 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.                                                                                                                             |
| <b>Claim Payment<sup>†</sup></b>                        | NACHA Corporate Credit or Deposit Entry with Addenda Record (CCD+) | An electronic funds transfer (EFT) from a health plan's bank to a provider's bank; including payment and data specific to the payment.                                                                                                                     |
| <b>Remittance Advice<sup>†</sup></b>                    | ASC X12N 835                                                       | The transmission of explanation of benefits or remittance advice from a health plan to a provider explaining a payment.                                                                                                                                    |

<sup>†</sup> Both HIPAA standards and CAQH CORE Operating Rules are federally mandated.

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

Medical plans represented 204 million covered lives, or 60 percent of the United States enrolled population. Medical plans also accounted for 3 billion claims received and 14 billion transactions annually. In comparison, dental plans

represented 126 million covered lives and approximately 48 percent of the enrolled population. Dental plans represented a smaller portion of volume with 201 million claims received and a total of 828 million transactions.

| Basic Characteristics of Data Contributors, 2016-2022 CAQH Index |            |            |            |            |            |            |            |
|------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|                                                                  | 2016 Index | 2017 Index | 2018 Index | 2019 Index | 2020 Index | 2021 Index | 2022 Index |
| MEDICAL                                                          |            |            |            |            |            |            |            |
| Plan Members<br>(total in millions)                              | 140        | 155        | 160        | 154        | 167        | 202        | 204        |
| Proportion of Total<br>Enrollment (%)                            | 46         | 51         | 49         | 47         | 51         | 61         | 60         |
| Number of Claims<br>Received<br>(total in billions)              | 2          | 2          | 2          | 2          | 2          | 2          | 3          |
| Number of Transactions<br>(total in billions)                    | 5          | 6          | 8          | 8          | 10         | 12         | 14         |
| DENTAL                                                           |            |            |            |            |            |            |            |
| Plan Members<br>(total in millions)                              | 112        | 117        | 106        | 111        | 112        | 116        | 126        |
| Proportion of Total<br>Enrollment (%)                            | 46         | 48         | 44         | 44         | 43         | 44         | 48         |
| Number of Claims<br>Received<br>(total in millions)              | 173        | 182        | 177        | 185        | 186        | 156        | 201        |
| Number of Transactions<br>(total in millions)                    | 564        | 650        | 731        | 726        | 740        | 703        | 828        |

## Annual Volume Reported by Medical and Dental Plans, 2021-2022 CAQH Index

| Transaction                                 | Number of Transactions<br>(in millions) |            |               |            | Number of Transactions<br>(per member) |          |            |          |
|---------------------------------------------|-----------------------------------------|------------|---------------|------------|----------------------------------------|----------|------------|----------|
|                                             | 2021 Index                              |            | 2022 Index    |            | 2021 Index                             |          | 2022 Index |          |
|                                             | Medical                                 | Dental     | Medical       | Dental     | Medical                                | Dental   | Medical    | Dental   |
| <b>Eligibility and Benefit Verification</b> | 5,324                                   | 164        | 7,546         | 190        | 28                                     | 1        | 37         | 2        |
| <b>Prior Authorization</b>                  | 38                                      | N/R        | 42            | NR         | <1                                     | N/R      | <1         | N/R      |
| <b>Claim Submission</b>                     | 2,392                                   | 156        | 2,866         | 201        | 13                                     | 1        | 14         | 2        |
| <b>Attachments</b>                          | 51                                      | 5          | 46            | 6          | <1                                     | <1       | <1         | <1       |
| <b>Acknowledgements</b>                     | 1,468                                   | 20         | 1,579         | 24         | 8                                      | <1       | 8          | <1       |
| <b>Coordination of Benefits</b>             | 69                                      | N/R        | 76            | 2          | <1                                     | N/R      | <1         | <1       |
| <b>Claim Status Inquiry</b>                 | 402                                     | 66         | 901           | 63         | 2                                      | 1        | 4          | 1        |
| <b>Claim Payment</b>                        | 490                                     | 130        | 411           | 157        | 3                                      | 1        | 2          | 1        |
| <b>Remittance Advice</b>                    | 1,338                                   | 162        | 897           | 185        | 7                                      | 1        | 4          | 1        |
| <b>Total Transactions</b>                   | <b>11,572</b>                           | <b>703</b> | <b>14,364</b> | <b>828</b> | <b>62</b>                              | <b>6</b> | <b>70</b>  | <b>7</b> |

N/R = Not Reported

## Data Analyses

All results were aggregated to ensure data privacy for each participant. Benchmarks were calculated and reported only for those transactions where three or more plans participated. The following metrics were reported for each transaction:

**Adoption Rate** — The degree to which medical and dental plans and providers complete transactions using fully electronic, partially electronic, or manual modes.

**Estimated Volume** — The number of fully electronic, partially electronic and manual transactions reported by medical and dental plans and providers weighted to a national level.

**Cost per Transaction** — The labor costs (e.g., salaries, wages, personnel benefits, and related overhead costs) associated with fully electronic, partially electronic, and fully manual transactions as reported by medical and dental plans and providers. Costs include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. Costs do not include system costs (e.g., maintaining, building, or buying software or other equipment).

**Estimated Spend** — The amount that medical and dental plans and providers spend conducting a transaction in total and by modality.

**Cost Avoided** — The amount that medical and dental plans and providers have saved by not conducting transactions using partially electronic or fully manual modes.

**Cost Savings Opportunity** — The cost savings that could be achieved by switching the remaining partially electronic and fully manual transactions to fully electronic transactions.

**Time to Conduct** — The time required for providers to conduct a fully electronic, partially electronic and fully manual transaction.

**Time Savings Opportunity** — The time that providers could save by switching the remaining partially electronic and fully manual time to conduct a transaction to a fully electronic time.

## Overview of Reported Data and Benchmarks per Transaction, 2022 CAQH Index

| Transaction                          | Adoption |        | Cost per Transaction |        | National Spend and Cost Savings Opportunity |        | Time to Conduct a Transaction |        | First Index Report Year Studied |        |
|--------------------------------------|----------|--------|----------------------|--------|---------------------------------------------|--------|-------------------------------|--------|---------------------------------|--------|
|                                      | Medical  | Dental | Medical              | Dental | Medical                                     | Dental | Medical                       | Dental | Medical                         | Dental |
| Eligibility and Benefit Verification | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      | ◆                             | ◆      | 2013                            | 2015   |
| Prior Authorization                  | ◆        | N/R    | ◆                    |        | ◆                                           |        | ◆                             |        | 2013                            |        |
| Claim Submission                     | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      | ◆                             | ◆      | 2013                            | 2015   |
| Attachments                          | ◆        | ◆      | ◆                    |        | ◆                                           |        | ◆                             |        | 2014                            | 2016   |
| Acknowledgements                     | ◆        | ◆      |                      |        |                                             |        |                               |        | 2017                            | 2021   |
| Coordination of Benefits             | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      |                               |        | 2015                            | 2022   |
| Claim Status Inquiry                 | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      | ◆                             | ◆      | 2013                            | 2015   |
| Claim Payment                        | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      | ◆                             | ◆      | 2013                            | 2015   |
| Remittance Advice                    | ◆        | ◆      | ◆                    | ◆      | ◆                                           | ◆      | ◆                             | ◆      | 2013                            | 2016   |

N/R = No Benchmark Reported (Insufficient Data)

## ADOPTION RATE

Adoption rates are calculated using only medical and dental plan reported volumes. Transaction adoption is classified into three modes:

**Fully Electronic** — Transactions conducted using a HIPAA-mandated standard, unless otherwise specified.

**Partially Electronic** — Transactions conducted using web portals and interactive voice response (IVR) systems.

**Fully Manual (Manual)** — Transactions requiring end-to-end human interaction such as telephone, mail, fax, and email.

For the figures depicting the medical and dental plan adoption rates, adoption rates were calculated by mode as a proportion of the total volume reported by plans and represent the percent distribution of transactions conducted by mode. The annual percentage point change is computed as the arithmetic difference between percentages.

## ESTIMATED VOLUME

### Plan Estimated Volume

The total transaction volume is estimated based on the proportion of covered lives represented by participating medical and dental plans using the AIS Directory of Health Plans for medical plans and reported enrollment volumes from dental plans. The extrapolated national volume for each transaction is calculated by mode as follows for both medical and dental plans:

**Extrapolated Plan Volume (per modality) = Volume Reported by Plans / Percent of Covered Lives Represented by CAQH Data Contributors**

### Provider Estimated Volume

The total transaction volume is estimated based on the size and type of provider using the American Medical Association (AMA) distributions<sup>32</sup> of physicians by practice size and the American Dental Association (ADA)

distributions<sup>33</sup> of dental practice type. For the 2022 weighting methodology, medical providers were split into three groups: Less than 5 physicians (33.6 percent), 5-50+ physicians (56.5 percent) and hospitals (9.7 percent).

Dental providers were split into 3 groups: non-DSO affiliated solo practice (28 percent), DSO affiliated solo or group practice (8.3 percent) and non-DSO affiliated group practice (63.7 percent).

Provider volume was calculated using the average mode distribution by transaction and mode type and by AMA or ADA group size. The AMA and ADA distributions were used to weight the mode distributions reported by medical and dental providers. These weighted distributions by mode were applied to the national estimated plan volume to calculate the national provider estimated volume by mode.

**Extrapolated Provider Volume (per modality) = Total Plan Estimated Volume for a Given Transaction\* Provider Modality Distribution**

The industry estimated volume for each transaction is the sum of the plan estimated volume and the provider estimated volume for each mode.

## COST PER TRANSACTION

Transaction costs are reported for fully electronic, partially electronic and manual transactions for medical and dental plans and providers when available depending on sample size. For medical and dental plans, the cost per transaction by mode is a weighted average based on the data submitted by participants reporting a valid result using the proportion of their membership enrollment. The calculation requires both the reporting of a valid transaction volume and transaction cost by a survey participant to be included in the weighted average cost.

For medical and dental providers, weighted average costs per transaction by mode were calculated by NORC based on transaction type, average staff time to conduct a transaction and cost per transaction for each mode.

32 Carol K. Kane, "Recent Changes in Physician Practice Arrangements: Private Practice Dropped to Less Than 50 Percent of Physicians in 2020," American Medical Association, accessed November 2022, <https://www.ama-assn.org/system/files/2021-05/2020-prp-physician-practice-arrangements.pdf>.

33 Dentist Profile Snapshot by State: 2016, accessed November 2022, <https://www.ada.org/resources/research/health-policy-institute/dentist-workforce>.

The NORC methodology followed a three-step process to calculate weighted costs per transaction for medical and dental providers:

- The average loaded salary per minute per mode for each provider was created by dividing the average salary by the number of minutes in a work year, then multiplying by a specific loading factor to account for benefit and overhead costs.
- Then the average loaded cost per transaction mode was calculated by multiplying the average loaded salary per minute with the average time per transaction by mode.
- The AMA or ADA group level cost per transaction estimates were then multiplied by the practice size average proportions across the three AMA and ADA groups to create weighted group cost estimates. Finally, the weighted group cost estimates were

| Estimated Medical and Dental Spend, Cost Savings Opportunity and Cost Avoided, 2022 CAQH Index (in millions) |                   |                  |                          |                   |                   |
|--------------------------------------------------------------------------------------------------------------|-------------------|------------------|--------------------------|-------------------|-------------------|
|                                                                                                              | Manual Spend*     | Estimated Spend  | Cost Savings Opportunity | Electronic Spend* | Cost Avoided      |
| <b>MEDICAL</b>                                                                                               |                   |                  |                          |                   |                   |
| Eligibility and Benefit Verification                                                                         | \$ 162,718        | \$ 26,471        | \$ 12,806                | \$ 13,665         | \$ 136,246        |
| Prior Authorization                                                                                          | \$ 1,655          | \$ 1,010         | \$ 449                   | \$ 561            | \$ 645            |
| Claim Submission                                                                                             | \$ 27,450         | \$ 11,133        | \$ 2,255                 | \$ 8,878          | \$ 16,317         |
| Attachments                                                                                                  | \$ 600            | \$ 515           | \$ 213                   | \$ 302            | \$ 85             |
| Coordination of Benefits                                                                                     | \$ 350            | \$ 66            | \$ 27                    | \$ 38             | \$ 284            |
| Claim Status Inquiry                                                                                         | \$ 28,146         | \$ 7,297         | \$ 3,582                 | \$ 3,716          | \$ 20,849         |
| Claim Payment                                                                                                | \$ 4,784          | \$ 2,782         | \$ 938                   | \$ 1,844          | \$ 2,002          |
| Remittance Advice                                                                                            | \$ 11,072         | \$ 5,691         | \$ 2,039                 | \$ 3,652          | \$ 5,381          |
| <b>Total</b>                                                                                                 | <b>\$ 236,775</b> | <b>\$ 54,965</b> | <b>\$22,309</b>          | <b>\$32,656</b>   | <b>\$ 181,809</b> |
| <b>DENTAL</b>                                                                                                |                   |                  |                          |                   |                   |
| Eligibility and Benefit Verification                                                                         | \$ 4,133          | \$ 1,265         | \$ 664                   | \$ 600            | \$ 2,869          |
| Claim Submission                                                                                             | \$ 1,704          | \$ 964           | \$ 275                   | \$ 689            | \$ 740            |
| Coordination of Benefits                                                                                     | \$ 12             | \$ 7             | \$ 4                     | \$ 3              | \$ 5              |
| Claim Status Inquiry                                                                                         | \$ 1,654          | \$ 872           | \$ 622                   | \$ 251            | \$ 782            |
| Claim Payment                                                                                                | \$ 1,089          | \$ 949           | \$ 440                   | \$ 508            | \$ 141            |
| Remittance Advice                                                                                            | \$ 1,563          | \$ 1,293         | \$ 568                   | \$ 725            | \$ 271            |
| <b>Total</b>                                                                                                 | <b>\$ 10,155</b>  | <b>\$ 5,350</b>  | <b>\$ 2,573</b>          | <b>\$ 2,776</b>   | <b>\$ 4,808</b>   |
| <b>MEDICAL AND DENTAL INDUSTRY</b>                                                                           |                   |                  |                          |                   |                   |
| <b>Total</b>                                                                                                 | <b>\$ 246,930</b> | <b>\$ 60,315</b> | <b>\$24,882</b>          | <b>\$35,432</b>   | <b>\$ 186,617</b> |

\*Spend if all transactions were conducted manually or fully electronically.

summed to create the overall weighted cost per transaction for each transaction type and mode.

## ESTIMATED SPEND, COST AVOIDED AND COST SAVINGS OPPORTUNITY

### Estimated Spend

Estimated spend is calculated by multiplying the estimated volume per mode by its respective weighted cost per transaction for medical and dental plans and providers within a transaction. The total spend per transaction is equal to the sum of spend for each mode per transaction.

### Estimated Cost Avoided

The estimated cost avoided is the arithmetic difference between the spend if all transactions were conducted manually and the total estimated spend by transaction. The total manual spend per transaction was computed by multiplying the estimated national volume of all modes by the manual cost per transaction.

### Estimated Cost Savings Opportunity

The cost savings opportunity for switching from manual to fully electronic transactions is calculated by multiplying the estimated national volume of manual transactions by the cost per transaction difference between fully electronic and manual transactions for each transaction. The cost savings opportunity for switching from partially electronic to fully electronic transactions is calculated by multiplying the estimated national volume of partially electronic transactions by the cost per transaction difference between the fully electronic and partially electronic transactions for each transaction.

## TIME SAVINGS OPPORTUNITY

The time savings opportunity per transaction was estimated using the arithmetic difference between the average time for providers to conduct a manual transaction and a fully electronic transaction or the arithmetic difference between the average time for providers to conduct a partially electronic transaction and a fully electronic transaction.

| Average, Minimum and Maximum Provider Time Spent Conducting Transactions, Medical, 2022 CAQH Index |            |                                                        |                                                    |                                                    |                                            |
|----------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------|
| Transaction                                                                                        | Mode       | Average Time Providers Spend per Transaction (minutes) | Min Time Providers Spend per Transaction (minutes) | Max Time Providers Spend per Transaction (minutes) | Average Time Savings Opportunity (minutes) |
| Eligibility and Benefit Verification                                                               | Manual     | 16                                                     | 1                                                  | 45                                                 | 14                                         |
|                                                                                                    | Partial    | 7                                                      | <1                                                 | 16                                                 | 5                                          |
|                                                                                                    | Electronic | 2                                                      | <1                                                 | 6                                                  |                                            |
| Prior Authorization                                                                                | Manual     | 20                                                     | 3                                                  | 47                                                 | 11                                         |
|                                                                                                    | Partial    | 12                                                     | 1                                                  | 30                                                 | 3                                          |
|                                                                                                    | Electronic | 9                                                      | <1                                                 | 20                                                 |                                            |
| Claim Submission                                                                                   | Manual     | 8                                                      | <1                                                 | 22                                                 | 5                                          |
|                                                                                                    | Electronic | 3                                                      | <1                                                 | 10                                                 |                                            |
| Attachments                                                                                        | Manual     | 10                                                     | 1                                                  | 35                                                 | 5                                          |
|                                                                                                    | Electronic | 5                                                      | <1                                                 | 10                                                 |                                            |
| Claim Status Inquiry                                                                               | Manual     | 19                                                     | 3                                                  | 53                                                 | 15                                         |
|                                                                                                    | Partial    | 9                                                      | <1                                                 | 18                                                 | 5                                          |
|                                                                                                    | Electronic | 4                                                      | <1                                                 | 10                                                 |                                            |
| Claim Payment                                                                                      | Manual     | 8                                                      | <1                                                 | 20                                                 | 4                                          |
|                                                                                                    | Electronic | 4                                                      | <1                                                 | 11                                                 |                                            |
| Remittance Advice                                                                                  | Manual     | 11                                                     | 2                                                  | 30                                                 | 7                                          |
|                                                                                                    | Partial    | 9                                                      | <1                                                 | 20                                                 | 5                                          |
|                                                                                                    | Electronic | 4                                                      | <1                                                 | 10                                                 |                                            |
| Total Time Savings Opportunity (Manual)                                                            |            |                                                        |                                                    |                                                    | 61                                         |
| Total Time Savings Opportunity (Partial)                                                           |            |                                                        |                                                    |                                                    | 18                                         |

## Average, Minimum and Maximum Provider Time Spent Conducting Transactions, Dental, 2022 CAQH Index

| Transaction                              | Mode       | Average Time Providers Spend per Transaction (minutes) | Min Time Providers Spend per Transaction (minutes) | Max Time Providers Spend per Transaction (minutes) | Average Time Savings Opportunity (minutes) |
|------------------------------------------|------------|--------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------|
| Eligibility and Benefit Verification     | Manual     | 13                                                     | 1                                                  | 37                                                 | 10                                         |
|                                          | Partial    | 7                                                      | 1                                                  | 19                                                 | 4                                          |
|                                          | Electronic | 3                                                      | <1                                                 | 7                                                  |                                            |
| Claim Submission                         | Manual     | 6                                                      | 1                                                  | 20                                                 | 3                                          |
|                                          | Electronic | 3                                                      | <1                                                 | 8                                                  |                                            |
| Claim Status Inquiry                     | Manual     | 16                                                     | 1                                                  | 46                                                 | 13                                         |
|                                          | Partial    | 8                                                      | <1                                                 | 26                                                 | 5                                          |
|                                          | Electronic | 3                                                      | <1                                                 | 9                                                  |                                            |
| Claim Payment                            | Manual     | 5                                                      | <1                                                 | 15                                                 | 2                                          |
|                                          | Electronic | 3                                                      | <1                                                 | 10                                                 |                                            |
| Remittance Advice                        | Manual     | 6                                                      | 1                                                  | 15                                                 | 3                                          |
|                                          | Partial    | 6                                                      | <1                                                 | 20                                                 | 3                                          |
|                                          | Electronic | 3                                                      | <1                                                 | 10                                                 |                                            |
| Total Time Savings Opportunity (Manual)  |            |                                                        |                                                    |                                                    | 31                                         |
| Total Time Savings Opportunity (Partial) |            |                                                        |                                                    |                                                    | 12                                         |

## Limitations

COVID-19 impacted state healthcare utilization differently:

- The CAQH Index does not account for volume and cost variances by state, therefore, the aftermath of COVID-19 on healthcare utilization is only represented as aggregated data and may not accurately reflect individual states. Factors such as number of COVID-19 patients in state, state size and medical resource availability, vaccine availability, emergency preparedness, etc. were not considered.

Some over-counting and under-counting of transaction volume may occur:

- Some transactions may be reported as fully electronic transactions even if they were initially sent as a manual transaction and then converted to a fully electronic transaction by a practice management system.

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

- Some eligibility and benefit verification transactions may never result in a claim submission or claim

payment since some practice management systems make periodic eligibility and benefit verification requests that are not connected to patient encounters.

- Some claim submission transactions may not be requests for payment since only a few plans can distinguish claim submissions that are requests for payment from encounter reports versus claim submissions that are only transmissions of medical service information.
- Some transactions may not result in a claim payment transaction if there is no payment due from the health plan after adjudication, such as when a patient is meeting the annual deductible.

The CAQH Index uniquely tracks only direct costs:

- Costs reported include the labor time required to conduct the transaction, not the time and cost associated with gathering information for the transaction and follow-up. System costs associated with using clearinghouses or third-party vendors are excluded from the cost and savings estimates.

Sample variation may impact some transaction cost trends from year to year:

- Medical and dental provider costs to conduct a transaction reflect only a snapshot in time for the specific group of providers. Sampling factors such as salary increases or declines, learning curve for a new employee to process a transaction and the mix of specialty type may impact the trending of data.
- The ability to report on all transactions exchanged is dependent on accurate reporting practices used by health plans and providers. Due to employment changes and increases in utilization after the pandemic emergency, some health plans and providers may have had new staff gathering and submitting data, increasing data variability.

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| 2022 CAQH Index Advisory Council Member | Organization                              |
|-----------------------------------------|-------------------------------------------|
| Amy Neves                               | Aetna                                     |
| Chuck Vandenberg                        | Elevance Health                           |
| Deanna Bordeau                          | Blue Cross Blue Shield of Michigan        |
| Edward Smith                            | athenahealth                              |
| Elizabeth Templeton                     | Florida Blue                              |
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| Tab Harris                              | Florida Blue                              |
| Terrence Cunningham                     | American Hospital Association             |
| Thomas L. Meyers                        | America's Health Insurance Plans          |

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

## How to Participate in the CAQH Index

All medical and dental plans, providers and vendors are encouraged to contribute data to the CAQH Index. Data collection begins in Summer 2023. To participate in the 2023 CAQH Index and for more information, please email [explorations@caqh.org](mailto:explorations@caqh.org).



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