

Interactive Adjudication

A Whitepaper on the
Health Industry Computerized Transaction System
with Thoughts on
How the “Credit Card Swipe” Model Might
Improve Our Current State of Affairs

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Introduction – The Credit Card “Swipe” as a Transaction Model

Consider the case of an apparently simple transaction that happens millions of times a day: the credit card “swipe.” When a merchant swipes a credit card through a machine, the transaction is immediately confirmed (or denied) and 98-99% of the money is transferred to the merchant’s bank account the next day. This way, the cardholder does not need to wait for confirmation. The merchant does not have to wait to receive payment. And the bank, instead of dealing with hundreds of thousands of individual deposits each day, receives one lump electronic payment for each merchant. The cardholder, in turn, pays one large monthly check (often electronic) for all transactions.

Now, imagine that it did not work like that. Each time you wanted to use your credit card, you would wait weeks to receive confirmation. The merchant would wait months to receive payment as the credit card company manually examined each individual request. Does it seem inconvenient and inefficient? That is how the health insurance (or healthcare payer) system is functioning today.

Ideally, insurance companies would function similarly to credit card companies. Each company would electronically receive and instantaneously process claims from healthcare providers. Each time a claim was submitted electronically for a patient service, the following process would ensue:

1. The patient would be instantly confirmed as an insured party;
2. The provider would be notified immediately of the amount that the payer intends to reimburse the provider for services rendered;
3. The provider would determine what remaining balance the patient must pay on the date of service. Just as when her credit card is swiped at the store, the patient would not have to wait for confirmation, and the provider will not have to wait for payment.

The Provider’s Dilemma in Today’s Transaction System

Today’s provider/payer communication system is unnecessarily inefficient. Providers are relegated to choosing from one of two unsatisfactory options. First, they can choose to ‘accept’ insurance, receiving only minimal, if any, reimbursement payments for services provided. In this case providers must submit claims for each patient, electronically or by mail, to various insurance companies in a wide array of claim formats. This process is exacerbated by the many errors that hold up payment. Insurance companies systematically underpay the physicians’ practices

and hospitals that must pay for manpower to fight through the bureaucratic tangle involved in challenging underpaid or erroneously denied claims. Primary care medical providers compensate for these failures in the insurance reimbursement system by seeing forty patients per day in ten-minute slots, which not only lowers the overall quality of care, but also encourages an increase in referrals to specialty doctors, which ultimately raises payers' costs for treating the patient. Providers' other option is to not participate with insurance. Patients pay in full for services when they are seen, after which the patients must file their own claims with their insurers, in order to receive reimbursement. Often patients cannot afford doctors' services on these terms, leaving either an unpaid provider or an untreated patient.

Current Computerization Attempts – Too Small a Step in the Right Direction

Many doctors and hospitals electronically submit claims to insurance companies, which would seem to be a positive step towards the credit card "swipe" model. However, the current electronic claims submission process requires that providers register with each individual insurance company, and then comply with each one's different coding and formatting demands. Even after a healthcare provider registers with the required payers and meets all claim requirements, she still do not necessarily receive a prompt response to her claims. ***Medicare claims usually process in two weeks. Other insurance companies often take more than a month to respond.***

Today's system is as costly, inefficient and patently objectionable as waiting six weeks to pay for groceries with a credit card would be. Small medical practices that accept insurance lose 10-30% of their total revenue just in order to maintain billing services. In addition, insurance companies are wasting their time and money (2-3% of their revenue) employing clerks and claim adjusters who examine each claim and respond to provider and patient challenges. This waste of time and resources could be avoided by creating a standardized interactive electronic claim system for doctors, hospitals, pharmacies and insurance companies.

The Standardization Solution

National Plan and Provider ID

This is an area where the HIPAA laws have mandated a great benefit that we can implement quickly. Today, every doctor has a number that authorizes him or her to prescribe medicines, a different number in each insurance company's database and yet another number in their other business affairs. HIPAA laws mandate that all insurance companies and healthcare providers have one nationally recognized number and this is the first step in developing a standard that will allow payers and providers to communicate efficiently. Since providers often use billing services, we must also standardize their enumeration.

Standardized Communication

Today, healthcare payers and providers use dial-up lines, leased lines, mail, clearinghouses and other methods to transmit information to one another. This overly wide variety of communication pathways is an obstacle to standardization (see previous Rapid Data Integration, LLC white paper: "Standardizing Communication and Encryption in the HIPAA Environment," available at http://www.radaint.com/Standardizing_Comm_and_Encrypt_in_Healthcare.pdf).

The simplest and most effective lines of communication are over the internet, where information can be instantly sent from one party to another. Any standardized communication effort is sure to utilize the internet.

Encryption

The internet is a natural, and probably necessary, part of the standardization of the health claims process. However, the internet's key disadvantage is its relative insecurity, meaning that without substantive protective measures, sensitive patient data can be exposed to an unacceptable level of risk of exposure. Therefore, the greatest obstacle to standardizing communication protocols is the lack of data security and encryption methods. An encryption system must be promptly set up to protect confidentiality when transmitting data from the healthcare providers to the insurance companies and vice versa.

The important, simple encryption system requires the following:

Each healthcare entity (provider, insurer, and patient) must be assigned a public and private encryption key.

A national database must be developed, on which all public keys will appear.

When this encryption system is in place, we can envision that most claims transactions will emulate the "credit card swipe" model as follows:

1. Dr. Smith wishes to send a claim form to Medicare containing diagnosis and treatment codes for a specific patient.
2. Dr. Smith's computer, upon sending, will automatically encrypt the message with his private key and Medicare's public key.
3. Then, in order to view the document, Medicare's computer system will decrypt it first by using Dr. Smith's public key -- allowing them to verify the origin of the claim (like an electronic signature).
4. Then, Medicare's computer system will open the document using Medicare's private key.

This entire process will be seamless and instantaneous once the computer system is set up for all parties.

Claim Format

Once an encryption system is designed and communication methods are in place, insurance companies must truly standardize the format in which they wish to receive claims. Today, most payers are X12 compatible. However, to make up for X12's shortfalls, each company has its own set of requirements (expressed in the requisite "companion guide") for the specific format of the X12 claim. These irregularities force healthcare providers to invest a wasteful amount of time manually adjusting, programming and testing compatibility with each insurance company's claim submission system

Adjudication Systems

Finally, in order for the provider systems to be compatible with the interactive claims, the patient accounting systems and the insurance companies' adjudication systems must be improved or replaced. These systems must be modified so that they can transmit and retrieve information from the internet and automatically interpret the claim and its response. Application system replacement and alteration is already occurring, as the older systems do not comply with the new (HIPAA required) data content.

Conclusion

Today, of the one trillion dollars involved yearly in the healthcare industry, approximately 200 billion are wasted on unnecessary steps in claim processing. Though the implementation of a new, unified standard will not be inexpensive, it is significantly less than the \$200 billion per annum that current waste is costing.

HIPAA laws are mandating a change, and economic common sense dictates the same. Can we move towards a "credit card swipe" model of transaction efficiency? The building blocks are there.

ADDENDUM: Frequently Asked Questions

Won't the new system be too costly for insurance companies to initiate?

Payers have expressed concern over the set-up costs for a new system; however, today insurance companies print and mail millions of checks to healthcare providers or to their members. Transferring to a standardized electronic system will save them tremendous sums by eliminating such a large percentage of their paper-moving systems.

Will the providers move towards total electronic billing?

Understandably, patients wish to go to the best providers and the providers do not like turning away patients simply because of the insurance company they (or their employer) chose. Yet in today's healthcare environment, electronic billing from provider to payer is tied to the business contracts between these two parties. As a result, setting up an electronic billing system today seems unbeneficial to many healthcare providers. If this challenge was not enough, providers have found that payers continue to demand exceptions or refuse to accept direct electronic submissions.

The current HIPAA regulations allow insurance companies to maintain different claim requirements via their companion guides. But the HIPAA laws (which mandate that payers and providers work on an electronic claims system) can be amended to mandate a standard communication protocol. The enforcement of these HIPAA laws must be set up to benefit, rather than penalize, providers, who often get trapped on the "front lines" of HIPAA implementation. If the communications protocol standardization can be mandated and implemented, not only will electronic billing be beneficial to providers, it will be the only feasible method of claim submission.

If information is transmitted through the internet, will confidentiality be breached?

The dangers involved in using the internet include: release of confidential information, fraud, spoofing and virus attacks. Yet while these dangers are magnified and multiplied in a unified networking environment like the internet, they also exist in the current electronic-transmission systems (dial-up connections, leased lines, etc.). The protections put in place to counter these very real threats, on the internet, are generally not even available in non-internet based environments.

The cost savings that are gained by moving to standardized internet transmission will more than pay for the measures required to ensure that all data is transmitted securely, and all parties will benefit from both improvements.

What do you think about the pharmaceutical industry's claims standardization?

The pharmacies are a step ahead of the rest of the healthcare system, having implemented a standard interactive claim standard years ago. One of the critical components of this standard is the self-numbering they instituted.

Perhaps not surprisingly in this light, pharmacies are currently unhappy with the additional numbers being imposed on them by Medicare and Medicaid. How pharmacies deal with the government's efforts at standardization will be interesting, and instructive in this context, to watch in the coming years.