



The Intersection of Healthcare and Financial Systems

**A White Paper by the HIMSS Financial Systems
Financial / Banking in Healthcare Work Group**

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Executive Summary

HIMSS' first white paper on healthcare banking, developed by the HIMSS Banking and Healthcare Task Force and published in 2008, represented banking, clearinghouse and provider constituencies. The primary objective of the 2008 white paper is consistent with the 2009 work group activities focused on updating the white paper. The intent of the updated white paper is to provide educational information to facilitate the understanding of financial and banking business practices in the healthcare industry. This white paper addresses topics of interest to both providers and financial institutions operating together in today's healthcare space.

Nothing in this white paper should be construed as representing that HIMSS or this work group is warranting the success of any particular practice or entity. This white paper does not serve as a comprehensive reference guide for the many innovative banking services supported by financial institutions serving the healthcare industry.

The white paper's primary purposes are to:

- Identify intersection points between the healthcare industry and the financial banking industry
- Facilitate awareness and education within the healthcare community about the banking system and related payment networks
- Present where these payment networks can be leveraged in the industry and review their utilization by healthcare payers, providers and consumers
- Describe the intersection points of these two industries with the advent of consumer driven healthcare
- Detail where banking products and services can be utilized more effectively today and in the future in healthcare to meet the needs of all stakeholders.

This paper achieves these objectives with an overview of the current payment process in healthcare and the challenges encountered by both the healthcare and banking industries in their efforts to ensure secure and private payment transactions among providers, payers and patients. The paper includes tools, resources and industry practices with a review of the intersection of these two industries.

The banking industry has broad and deep experience in dealing with information security, in particular, applying technology to improving workflows and early identification of security and information protection issues. Over the past five years, banking has moved aggressively to use this technology to drive the electronic of payments. The same technology and experience can be used to expedite healthcare payment processing. As a relative newcomer to this domain, the healthcare industry perceives many unknowns in these electronic transactions. Members of this 2009 HIMSS work group representing banking, financial institution systems and healthcare organizations recognize the need to share this knowledge and experience from the banking industry to healthcare. The primary audience is the healthcare industry, with the secondary audience being the banking industry.

Over the past several years, healthcare providers have been subjected to increasing fiscal pressures on their margins. These issues include declining or stagnant reimbursement from payers including Medicare, higher deductibles, elevated levels of bad debt and continued complexities with coding, billing, collections and follow up activities. One factor that is changing is the role financial institutions are playing to assist healthcare providers with some of these issues. Historically, there have been long-standing relationships between financial institutions and healthcare providers. These relationships have primarily focused on services that financial institutions offered to healthcare providers around the issues of payment clearing and settlement. Also, there is an emerging focus on financial institutions taking on an expanded role in the revenue cycle process to address inefficiencies that exist through Web-enabled electronic transactions over the Internet infrastructure.

This new convergence between healthcare organizations and the banking industry is poised to offer a private, secure digital platform that may reshape the revenue cycle process and, ultimately, the care management process. In order to accomplish this, a number of issues must be addressed, including ensuring compliance with existing financial regulations, a higher level of security management, adoption *and* clarification of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) transactions, and technology system upgrades by payers and providers. This paper will provide the following information:

- Introduction of banking system and payment networks
- Overview of the revenue cycle process including the current state of claims processing
- Review of some integrated solutions offered by financial institutions to healthcare providers
- Identification of some future predictions as well as a section on frequently asked questions.

Introduction to the Banking System and Payment Networks

Financial institutions and banks have many roles as providers of credit and operating services. This section focuses on the role of banks in the execution of payments. Payments to healthcare providers are a combination of “claim payments” made by health plans and other institutions reimbursing the provider and “consumer payments” made by patients and guarantors for the patient liability portion of a reimbursement to a provider.

For the purposes of this paper, money or ‘value’ consists of deposits in banks, which are bank liabilities to their customers to honor checks or provide cash as requested. Payment networks process the transfers of bank liabilities from the bank of the consumer or health plan to the bank of the provider. These transfers are the reimbursement for healthcare services provided. This provides the basic framework for this discussion that money consists largely of bank deposits, which are bank liabilities.

Banks Enable Payment

The twelve (12) Federal Reserve Banks are the operating arms of the United States central banking system. These banks carry out a variety of functions, including providing services to financial institutions. Federal Reserve Financial Services include operating a nationwide automated clearinghouse (FedACH), a wire transfer service (Fedwire), a national settlement service (NSS), and check clearing services. The Federal Reserve provides these services to member banks and non-member banks that have accounts at a Federal Reserve Bank (FRB) or have a correspondent relationship with a bank that has an account at a Federal Reserve Bank. It must be noted that not all U.S. banks are members of the Federal Reserve System. Those that are not members often have correspondent relationships with member banks, thereby enabling access to the Federal Reserve System. Banks often settle financial obligations amongst themselves by moving funds from one bank's account at the Federal Reserve level to another bank's account at the Federal Reserve level. Banks "clear" payment transaction among each other and often "settle" their inter-bank obligations by moving funds amongst their accounts at the Federal Reserve Bank. The underlying transactions do not directly involve Federal Reserve settlement and are best understood by describing the options that are used at the healthcare provider site.

Payments to a provider can be made by a variety of methods including cash, check, credit/debit cards and electronic funds transfers (EFT), wire and Automated Clearinghouse (ACH).¹ With the exception of cash, payments are invariably finalized as EFT.

Providers work with their banks to implement the right treasury/cash management/merchant account services to accept these payments safely and efficiently and manage the related accounting. Banks can also assist in determining appropriate financial services to meet the needs of healthcare providers, such as imaging through remote data capture, converting checks or providing lockbox services.

Although cash payments to healthcare providers are typically few in number, healthcare providers need to have adequate safekeeping and operating controls in place to handle cash payments and safely deliver cash payments to the bank. The healthcare provider's bank can assist in ensuring controls are in place.

Checks remain the most frequently used non-cash payment method, although this number has been declining since 2003. The 2007 Federal Reserve Retail Payment Study found that in 2006, over 30 billion checks were written in the United States.² A variety of clearing arrangements may be used to clear and settle checks. Many local check clearinghouses offer banks the ability to exchange the physical checks and offer

¹ The Automated Clearing House Network is a highly reliable and efficient nationwide electronic funds transfer system, which provides for the interbank clearing of electronic payments for participating depository financial institutions.

² The 2007 Federal Reserve Retail Payment Study
http://www.frb services.org/files/communications/pdf/research/2007_payments_study.pdf

settlement services. Settlement may be accomplished by debiting and crediting correspondent accounts, that is, accounts that banks maintain with each other, or through a system such as the Federal Reserve National Settlement Service, which debits and credits accounts held at the Federal Reserve. The Federal Reserve also offers a national check clearing service that settles through accounts maintained at the Federal Reserve. The healthcare provider's bank can assist in obtaining lockbox services to expedite the receipt and processing of checks.

Checks are encoded with magnetic ink that identifies the bank (routing transit number) and account number of the checking account holder. The bank of first deposit, usually the healthcare provider's bank, further encodes the check with the dollar amount. This encoding enables magnetic ink character recognition (MICR) technology to read and sort it at the paying bank. In 2003, the Check Clearing for the 21st Century Act (Check 21) was signed into law and became effective on Oct. 28, 2004. The Check 21 Act gave a substitute check containing the MICR data and an image of both sides of the paper check the same legal equivalency as the original paper check. Banks have quickly adopted Check 21 technologies, and most offer business customers remote data capture (RDC) services so that the imaging can be done at the customer location. Banks exchange images in a variety of ways. Some banks have established direct exchanges, settling through correspondent accounts. Others process their Check 21 files through SVPCo, the nation's oldest payments association and processor, or the Federal Reserve.

Payments can be thought of as having two components: clearing and settlement. *Clearing* refers to the process of moving a payment (or notification of a payment) between the paid bank and the paying bank. *Settlement* refers to the process of debiting and crediting the account of the banks involved in the transaction. For check payments, clearing and settlement may occur at different times. For example, when a check is received by a healthcare provider, the clearing process involves the healthcare provider's bank presenting the check to the paying bank. The settlement occurs when the healthcare provider's bank is credited with the amount of the check and the payer's bank is debited.

Credit and debit card payments are increasingly used by consumers to pay for healthcare services. Debit and credit card payment transactions are transmitted to the card issuer using an automatic teller machine network (ATM) or other proprietary network. A card vendor (e.g., Visa, MasterCard, American Express, or Discover) makes payment to the provider through an ACH credit. There are two types of debit card transactions: personal identification number (PIN) and signature. PIN debit card transactions are similar to ATM withdrawals directly from a consumer's bank account and require that the consumer enter a PIN. Signature debit card transactions are similar to a credit card transaction. For the business accepting a credit or debit card payment, there is an interchange fee. Interchange fees average about 2 percent with the cost for accepting a PIN debit lower and the cost for accepting a credit card (or signature debit card) higher.

The EFT universe can be divided into two categories: large and small dollar transactions. *Large dollar transactions* are generally conducted through Fedwire and Clearing House Interbank Payments System (CHIPS) transactions. Fedwires are same day real time

funds transfers where the paying organization can ask its bank to move money from the Federal (Reserve) Account of the originating bank to the Federal (Reserve) Account of the receiving bank. These can be costly and are seldom used outside of occasional Centers for Medicare and Medicaid (CMS) payments to hospitals who have severe cash flow problems. The CHIPS transaction is similar to Fedwire in that it processes large-dollar transactions. Unlike Fedwire, these transactions are settled in batches (not real-time) and fees are generally smaller.

Small-dollar transactions constitute the bulk of electronic transactions encountered by providers. Most of these are the settlement of 'paper' checks processed either by the Federal Reserve, or through the ACH payment system, which handles both 'paper' checks and credit/debit card funding. Due to the Check 21 Act, an electronic image of a check is the legal equivalent of a physical check in clearing operations. This eliminates the burden of transporting and handling actual paper checks. The receiving bank (or increasingly the vendor) accepts a paper check and scans it. The check's information is captured as data points in an electronic file. The file (and not the paper check) is then electronically managed. This electronic check is cleared in the Federal Reserve System, or handed off to an automated clearinghouse processor.

The ACH operates as a prominent payment system for EFT. Every bank in the United States participating in the ACH must abide by rules promulgated by the National Automated Clearinghouse Association (NACHA), which cover file formats and bank responsibilities for participation in the network.³ ACH files pass between the banks via ACH clearinghouse computers in a proprietary private network. Typical transactions are payroll deposits, social security deposits and what are called 'trade payments.' Trade payments are business-to-business payments made to settle invoices, claims or bills submitted by commercial enterprises. Paper check transactions can be handled through ACH, due to Check 21. Once a paper check has been truncated to a data file meeting Check 21/ACH specifications, it is processed like any other ACH transaction. There are two ACH operators in the United States: EPN and FedACH.

NACHA develops the rules that every participant in the ACH must follow, whether an originating depository institution (ODFI), receiving depository institution (RDFI), or ACH operator. An ODFI originates an ACH file that is formatted using NACHA rules and submits to an ACH operator (EPN or FedACH) who delivers the ACH files to the proper Receiving Depository Financial Institution (RDFI).

ACH processing is the least expensive method of payment, but there may be significant technical start-up costs to originate or receive ACH files. The settlement of ACH files is typically the day following the date the file is received. A key advantage of the ACH is the ability to transmit additional information with the payment. NACHA has approved a

³ NACHA represents more than 11,000 member financial institutions, a network of regional payments associations and organization through various councils and manages the development, administration, and governance of the Automated Clearing House, (ACH). NACHA provides its members with the "NACHA Operating Rules" to manage the ACH Network, promotes the value of ACH Payments, and offers tools and resources to facilitate the adoption of ACH payments.

number of ANSI X12⁴ electronic data interchange (EDI) standards that may be carried as addenda to certain types of ACH transactions. Thus, many business-to-business (B2B) trade payments using the ACH and the related remittance information is transmitted with the ACH transaction. It can be easily re-associated using a trace number carried in the ACH file for when remittance or other trade information is carried on a separate EDI network. Healthcare providers should work with their bank for assistance using ACH for receiving or making payments, and in posting ACH information into their patient accounting systems.

One new use of the ACH is to enable consumer payments to be initiated through home-banking software. This initiative, Electronic Billing Information Delivery Services (EBIDS), uses the ACH network to deliver summary bills to a financial institution for posting to the banks home-banking application. A consumer can then access their summary and detail information through their bank and initiate an ACH payment. Businesses must sign up to deliver their bills via EBIDS, and financial institutions must sign up to offer bill presentment services to customers who have agreed to receive certain bills this way. This initiative is currently in pilot with NACHA, but is expected to become a model for expanding the ability of ACH to be used for consumer and corporate bill payment services.

For healthcare providers, HIPAA implementation guidelines allow only checks and two ACH formats in the transmission of money and data through the banking system. Providers may utilize the ACH network to initiate repetitive payments from patients on a payment plan. Some providers also utilize the ACH process to make electronic trade payments to suppliers, payrolls and for tax payments. The challenge for providers is getting the information from their bank about all received ACH items to support posting activities. When providers are paid electronically, payment processing costs less than when checks are used. When the remittance data is sent separately from funds the provider must receive EDI reporting services from its bank to manage the reconciliation of the bank account and the re-association with the data. Increased EDI bank reporting should be used to support reconciliation and re-association requirements at the provider organization. As providers add more payers as trading partners and these additional payers utilize EFT, bank reporting and re-association services will grow in importance.

Accepting debit and credit cards as forms of payment is now commonplace for providers. These services are sometimes branded “payment networks” but the funds settlement for all credit card transactions is a straightforward ACH deposit sent to the provider by the card vendor. American Express, Discover, Visa and MasterCard may all contract with a provider. These “merchant card” relationships require that a file be transmitted by the provider and at some point afterwards a payment is made by the card vendor to the bank account of the provider via an ACH transaction. Again, the challenge to the provider is

⁴ASC X12 is the official designation of the U.S. national [standards body](#) for the development and maintenance of [Electronic Data Interchange](#) (EDI) standards. ASC X12 has sponsored more than 315 X12-based EDI standards and a growing collection of [schemas](#) for [health care](#), [insurance](#), government, transportation, finance, and many other industries. ASC X12's membership includes 3,000+ standards experts representing over 350 companies from multiple business domains.

obtaining the required detailed information from the bank and from the card vendor to reconcile the payment to the files submitted and the related patient accounts posted. These “payment networks” move data but money is moved between banks by the ACH transactions described above. Credit card and debit card transactions are priced differently and are somewhat different. A debit card (which is often the instrument tied to a Consumer Driven Health Plan) utilizes the information process that governs the ATM network. These transactions, which require a PIN for completion, generally carry fewer fees than transactions requiring a signature, regardless if credit or debit cards are used. An accepted debit card transaction provides a guaranteed movement of funds from the consumer’s bank account to the provider’s bank account. As consumer transactions increase, healthcare providers should utilize the sophisticated banking services that support the retail industry, which will change point of sale “cashiering” business processes within the provider organization.

NACHA, the Federal Reserve, Financial Institutions, and the Processing of Web-Enabled Payments for Clearing and Settlement

In April 2008, NACHA, the electronic payments association, announced a pilot program of live transactions originated using NACHA’s Electronic Billing Information Delivery Services (EBIDS). A task force of financial institutions comprised of large and small telecom companies, high volume “billers” and the Cleveland Federal Reserve Bank developed an infrastructure to enable businesses and financial institutions to use the existing “Automated Clearing House” (ACH) Network as a universal, electronic channel with open standards for the distribution of consumer bills. Businesses are able to deliver electronic bills to a consumer’s financial institution, which will be presented to the consumer on the online banking platform, and to receive authorized credit payments through the secure ACH Network.

The goal of the EBIDS project is to increase the number of businesses and financial institutions that can support electronic bill presentment and payment, as large and small financial institutions can utilize the ACH network for presentment and payment. This is a new growth market for more diverse groups of financial institutions, with the goal of increasing adoption rates for e-bill presentment and payment across the board.

The model allows a business to originate a zero-dollar ACH transaction that contains a summary of the consumer’s bill in an addenda record. The transaction routes through the ACH Network from the business’s financial institution to the consumer’s financial institution and is presented to the consumer in a designed secure online session. The consumer authorizes payment without disclosing account information to the business. The consumer’s financial institution originates the ACH credit with remittance information to the business’s financial institution.

The EBIDS system moves electronic bill enrollments, bills, and payments through the ACH Network under the existing rules and interoperability infrastructure with open XML standards for addenda information. EBIDS is transparent to the consumer and offers a

number of consumer benefits such as receiving and paying bills in an identity managed, authenticated and trusted environment on their financial institution's online site.

Institutional Revenue Cycle – Processor / Banks Services

The goal of this section of the paper is to facilitate understanding and collaboration across healthcare providers and banks in order to explore ways to leverage the existing financial payment networks in the healthcare industry.

Introduction to the Revenue Cycle

The revenue cycle has evolved over decades to include multiple exchanges of information among providers, payers and patients. The process is complex and unique to the healthcare reimbursement services in the United States. Outlined below are key information exchanges in the revenue cycle process.

Hospital Provider (Institutional) Steps in Revenue Cycle:

1. Scheduling (elective)
2. Pre-Register, Pre-admission
3. Benefits Confirmation, Authorization
4. Financial Counseling
5. Registration, Check-In, Bed Control
6. Charge Entry, Revenue Protection
7. Care Documentation, Encoding
8. Billing, Claims Submission
9. Health Plans Payment Processing
10. Denial Management
11. Health Plan Follow-up
12. Secondary Billing
13. Patient and Guarantor Billing and Collections
14. Account Collections, Write-Offs

The revenue cycle process typically begins with the patient scheduling a visit to providers such as a hospital as an elective admission, clinic or outpatient visit or through the Emergency Department. The cycle process continues through the entire patient encounter until the account is billed and any patient obligation is paid or written off. What are described are the best practice solutions to automate and use the HIPAA transactions to shorten this revenue cycle process. Table 1 and Table 2 at the end of this white paper outline the process with the associated ANSI X12 transactions mandated by HIPAA. These tables include the use of bank reporting for patient payments—those payments not “covered transactions” under HIPAA. These may be accommodated by banking standards other than X12 transactions mandated under HIPAA.

Each step in the revenue cycle process outlined below includes a commentary on the provider process steps and the usual interaction with the banking systems for payment

services. This description focuses primarily on the hospital based provider and on the functional activities. It is acknowledged that smaller hospitals and/or physician practice settings may utilize cross trained and cross functional staff to complete some of the activities referenced in this section. Also, the electronic transaction references used below are identified by their X12 numbers and not the full X12 name for each transaction. These can be found in Table 2.

1) Scheduling

Provider Process Steps

- The admission is scheduled for elective inpatient visits, outpatient service visits and clinic (physician office based) visits.

Payment Service

- None

2) Pre-Register, Pre-admission

Provider Process Steps

- The financial and demographic information on the guarantor and the patient is collected.

Payment Service

- All applicable payment toward the patient deductible, co-insurance, co-pay or minimum deposit due is collected and processed. This is based on the institution's evaluation of the patient's liability and ability to pay.
- The role of the payment service area is to access the payment networks. The sources of payment may include cash, check, and ACH debit initiated by the provider or debit/credit cards. The actual funding accounts may have different tax names and tax treatment such as Healthcare Savings Accounts or Flex Spending Accounts but different payment mechanisms may be used to remove funds from the same account. There are multiple technologies for payment processing (cashiering) at the provider site. These include onsite electronic deposit of checks, initiation of credit card or debit card transactions or creation of an electronic file that will use the ACH network to debit the patient's bank accounts.
- This service can occur at the time of pre-admission or registration, admission or registration or later in the revenue cycle.

3) Benefits Confirmation, Authorization

Provider Process Steps

- The Patient's Eligibility (270/271) is checked and the insurance verification (policy limits, deductibles, etc.) is created and documented in the patient accounting system.
- The provider must obtain an Authorization / Referral from the Payer (278)

- The eligibility, authorization and referral information is documented in the patient's folder in the patient accounting system and/or in a document imaging system.

Payment Service

- At times, these steps are not completed during pre-registration. Patients may appear at the facility without an appointment or they may present at the Emergency Department for treatment. In these cases, authorization steps take place at the time of service.

4) Financial Counseling

Provider Process Steps

- If the patient has indicated an inability to meet the financial requirements, they can explore alternative arrangements. This can be done prior to admission, at admission, or while the patient is in the institution.

Payment Service

- Financial counselors may collect some funds at this point and/or arrange for a payment program acceptable to the patient. This may result in payments via any of the payment mechanisms and payment sources available to the patient.

5) Registration, Check-In, Bed Control

Provider Process Steps

- The money not collected at pre-admission can be collected at time of check-in. Typically, the patient will be notified of any obligation and payment can be processed at the time of registration or admission.
- The accounting transaction for the money received can be either posted electronically from a bank file of processed payments, or can be manually processed and entered into an online payment posting system.
- Registration documents can be filed in the patient's folder in the patient accounting system or the document imaging systems.

Payment Service

- All types of payments are processed using the bank's merchant services and the bank's card device(s) to process the deductible, co-insurance, co-pay or minimum deposit due based on the institution's evaluation of the patient's finances. If the patient has a Healthcare Savings Account or Flex Spending Account, the payment is deducted from that account and money is transferred to the provider's bank account. The bank creates a posting file with the payment information to be sent to the institution's process for posting to the patient's account.

6) Charge Entry, Revenue Protection

Provider Process Steps

- Charges are captured throughout the patient encounter for treatment, services and supplies provided to the patient. All charges are entered in the appropriate charge capture information software systems.
- The organization's Utilization Review staff validates the stay based on payer's criteria for reimbursement.

Payment Service

- None. If any money is collected, the bank and processor would perform similar functions as described at the time of registration.

7) Care Documentation, Encoding

Provider Process Steps

- The patient clinical record is utilized by the Medical Records Department staff for coding the medical record. Coding results in assignment of the appropriate ICD-9 Diagnosis, CPT procedure codes and associated code groupings (Diagnosis Related Groups (DRGs) or Ambulatory Patient Groups (APGs) based on the patient medical record documentation. Also, additional supporting clinical documentation may be required and provided as claim attachments for certain DRGs and APGs. Coding is necessary for claim payment on a timely basis.

Payment Service

- None.

8) Billing, Claims Submission

Provider Process Steps

- Up to this point in the revenue cycle, the provider has pre-registered the patient and collected the correct information from the registration process. This means the provider has collected the necessary information for the claim, identified the patient's insurance, checked his/her ability to pay, collected a deposit, integrated the charge detail from the clinical systems, and coded the procedures and diagnosis. After this is completed, the provider can submit the 837 claim to the payer.
- Providers may use contract management software systems to calculate expected reimbursement for their managed care contracts.
- The institution's Business Office submits a 'clean' (completed) claim to their clearinghouse for submission or sends the claim direct (837). The goal of many hospitals is to complete this process in three days after patient discharge.

Payment Service

- None.

9) Health Plans Payment Processing

Provider Process Steps

For the purpose of this paper, claim payments consist of both remittance information and a funds transfer.

Process steps must include cash management for paper and electronic payment and remittance processing for paper and EDI remittance data. Providers may receive health plan remittance data and checks at their facility while other providers outsource the function to a bank. Such outsourcing utilizes a bank lockbox service where the bank receives mail and deposits checks. Additional services may include imaging all checks and Explanation of Benefits (EOBs) plus correspondence. In addition, some banks convert the images to EDI Electronic Remittance Advice (ERA) files for automated posting. The steps below will describe mail and check processing. Providers may perform all of these functions internally so these steps present both provider functions and bank lockbox functions.

- Providers receive many claim payments via paper checks, EOBs and electronic online payment (EOP) documents sent to their business office or to a bank lockbox. Activities required include sorting claim payments, cashing checks, photocopying checks, creating posting batches and imaging posting batches. These functions may be done by the provider internally or outsourced to a bank lockbox operation.
- Providers must manage the deposit function for paper checks and receipt function for EFT payments. All received payments must be accounted for internally by the provider. Providers create batches for processing and reconcile the posted cash amounts to the cash received. EFT transfers must be 're-associated' with electronic remittance information *before* ERAs are posted. This is a requirement of generally accepted accounting principles. Providers must obtain bank deposit reports daily and determine which credits to their accounts relate to ERAs received separately. This re-association task increases as more and more payers convert to EDI payments and separate data and dollars.
- 'Cash' posting 'relieves' a receivable in the patient accounting system. The accounting transactions are limited to posting a credit for the payment, recording a contractual adjustment, or posting a write-off. The difficulty of the posting process is not so much with posting the credit as it is with accounting for denials and short fall payments.
- Posting is done manually via data entry by clerical staff or through an uploaded posting file when electronic remittance information is available for automated posting. Posting files can be used to update the contract management system or the denial management system as well as the accounts receivable system.

Payment Services

- Bank lockbox services accelerate funds availability by depositing checks into the clearing mechanism faster than providers can. This is a mature service first developed in 1948. In recent years, banks have added the ability to image

remittance data on high speed machines and present providers with the opportunity to post from images. More recently, some banks have Image or Intelligent Optical Character Recognition (IOCR) tools that turn EOB and check images into 835 formatted files. Some can pull data from the provider's 837 to create HIPAA-compliant 835 files. These electronic files are then ready for integration into the provider's system for posting. The IOCR can also take the payers' proprietary adjustment codes from the EOBs and translate them to standardized adjustment reason codes. This information is then sent to the denial management software that is part of the main healthcare software application or a niche software solution.

- Claim payments sent through the banking system allow the bank to pass 835 posting files to the provider, who can then post without human intervention. This is because the bank ensures that the dollar amount in the 835 matches the amount received into the checking account. This eliminates the re-association task for the provider.
- Bank balance reporting information can be used to perform re-association services. In some cases, the bank will obtain ERAs and store 835s until the matching funds are received. In other cases, processors such as revenue cycle management firms, practice management software systems and healthcare clearinghouses will use the bank reports to provide re-association services. Additionally, there are portal services available that provide a 'dashboard' to track 835 funding activity.

10) Denial Management

Provider Process Steps

- Insurance payment denials can be interfaced to denial management software systems. Additionally, follow up can be generated off the standard codes sets used on the 835. Combinations of the values in the code sets (Group Code, Claim Adjustment Reason Code and the Remittance Advice Remark Code) can be used to generate patient follow up. Institutions that can keep their denial rates at 3% or less are considered well run.

Payment Service

- Denial management (software) systems require standardized adjustment reason codes. Banks providing the IOCR service can enable 100% utilization of denial management software by enabling 100% 835 formatted data for the provider.

11) Health Plan Follow up

Provider's Health Plan Processor Service

- Some payers send an unsolicited response or a response (277) to a claim status inquiry (276). Typically, a comment is posted to the system recording the reason for it being paid, pended or denied.

Payment Service

- None

12) Secondary Billing

Many patients have secondary health plan coverage. In these circumstances, the provider can submit a secondary claim for additional payment from payers. This can be done electronically in the 837 transaction, which would incorporate 835 information from a prior payment. This business process is often done on paper, in part, for lack of 835 information from all payers. The banking service that creates 835 data for all payers facilitates this ability to submit all secondary claims electronically, a HIPAA mandated transaction called the Coordination of Benefits (COB) Transaction.

13) Patient and Guarantor Billing and Collections

Provider's Patient and Guarantor Process

- At this point in the revenue cycle process, if the provider has not been able to collect the deductible, coinsurance, or co-payment or there are additional patient payment obligations, the provider sends out a Patient Statement. There is a patient friendly billing initiative by the Healthcare Financial Management Association (HFMA) to create a user friendly statement for the patient/guarantor. Failure to respond to an initial patient statement may result in the mailing of additional "third party letters" to encourage payment. Statements and letters typically have a perforated stub known as a coupon on the lower section of the document. It contains required information to identify the patient account to a received payment. The stub or coupon contains data such as the patient number, payment amount and statement date. The patient mails the coupon along with the payment (check or credit card information) in a return envelope that is pre-addressed to a post office box rented by the bank.
- When the institution has contracted for patient payment lock box services with their Depository Bank, a scan line is added to the coupon portion of this statement. This enables the bank's optical character recognition (OCR) image technology to extract information from the scan line and the additional magnetic ink character recognition (MICR) encoded information from the patient's check (check number and dollar amount). The bank will then send back an electronic file to the provider for posting to Accounts Receivable. Image files of scanned items and checks are also available online or in a transmission as part of this patient payment lockbox service. If the coupon does not have a scan line, IOCR systems can create abbreviated 835 files.
- Statement printing processors also offer the ability to put the statements online (not sent in the mail) so that a patient can go online, see the statement and make a payment through the ePayment service. The combination of these services allows the vendor of these services to send an electronic file to update Accounts Receivable.

Payment Service

- A bank's patient lock box service vendors will create a payment file (NOTE: Patient's payments/payment information are not covered under HIPAA). This file can transmit information such as payment amount, calculated prompt payment

discount amounts (using the date on the scan line to determine if it has been paid in time), identified payment types (credit card, debit card, etc.) and posting comments. It can also contain Web site information to enable access to the source document. This is only available if the institution pays for the Web based service that presents the images of the check, coupon/stub and envelope with the post mark. The banks' Web service also can be used to send an image file to the processor for updating the patient's folder.

- Many banks and healthcare financial service technology vendors offer an ePayment service, which allows either the patient or an institution's representative to make a payment online. The ePayment service can send back a payment file that can be used to post the same transactions that are created from the patient lock box service. The Web service offered by the bank also sends an image of the ePayment transaction to the processor to file the image in the patient's folder. With more patients using online banking services, this mode of payment will become increasingly popular.

14) Account Collections, Write-Offs

Provider Process Steps

- Before writing off an account to bad debt, providers may give collection agencies an opportunity to 'work' the accounts to see if they can collect the money from the patient.
- Processors can receive and post the bank lock box bad debt payments to the bad debt accounts.

Payment Service

- The collection agency statements may also have scan lines so that the patient can send their payment with the statement to the bank lock box for processing. An electronic file can be sent to the processor for updating the bad debt file.

Claim Processing Today

Claim Generation

In the first step of the patient/provider interaction, the patient's demographics, coverage and eligibility information is collected by the provider's registration (software) system (ADT system). Examples of patient information include:

- Insurance information
- Address
- Physician's name and location
- Basic data on patient history and experience.

Upon Discharge, a "Claim" is created for the patient by the provider. This claim is sent to either the patient or more commonly, to the patient's insurance provider (payer). It contains information specific to the patient encounter such as diagnostic (ICD-9 and ICD-

10) and procedure (CPT) codes. Additionally, the claim contains information that identifies the patient and the payer. This information is gathered and validated by a set of protocols and submitted to the insurance provider for billing and payment in settlement of the care given. The reimbursement process within the healthcare industry has evolved over many years and has achieved a high degree of national standardization in the form of commonly used paper claim forms, Health Insurance Claim Form (HCFA 1500) and the Uniform Billing (UB04), and related electronic transaction standards. HIPAA mandated the healthcare industry to utilize ANSI ASC X12 transaction code standards.

The submission of the claim is completed either on paper or electronically. If electronic, the process is typically accomplished using the “837 Claim” transaction. The HIPAA mandated transactions, with its numbered transaction sets (835, 837, etc.) are a subset of a much larger set of North American ANSI standards for electronic documents that include many other transaction standards used in healthcare such as the purchase order (850) and invoice (810) used not only in healthcare but very widely used in manufacturing and distribution industries.

CMS has been an early adopter of many of the X12 standards, including adoption of the 835 standard for Medicare Part A claims payments in 1993—well before the HIPAA mandate. Providers wishing to continue with paper claims must solicit an annual exemption from their CMS payers.

Claims Submission—Role of the Claims Clearinghouse

Since the 1980s, healthcare clearinghouses have been providing electronic data services to healthcare providers, health plans, pharmacies and other healthcare organizations. These electronic data services move financial, administrative and clinical data over their secure networks.

Virtually all healthcare constituents utilize a clearinghouse for these services. They have greatly simplified the complex process of handling these types of electronic healthcare transactions. The clearinghouse provides a single point for an entity, such as a provider office, to drop off a file of transactions in whatever format the provider software system produces. Clearinghouses provide a wide range of service. For example, a clearinghouse will take the file, break it out by receiver (e.g., health plan, lab), apply any rules or edits required by the receiving end, translate the transactions into a HIPAA compliant format (if required) and ultimately transmit the file to the receiving end in whatever format they specify. Additionally, the clearinghouse will take any transaction acknowledgement reports generated from the receiving end indicating acceptance or rejection (with a reason) of the transactions, normalize them, and return them to the original sender.

Initially, EDI within the healthcare industry had been almost exclusively batch claims transactions. However, since the mid 1990s, the types of transactions have grown to include ERA, eligibility, lab requests, lab results, e-Prescriptions and many others. This has placed new demands on the clearinghouse infrastructure leading it to evolve over time as a highly reliable and secure network, supporting batch and real-time transmission

modes, multiple transmission methods, as well as a high volume of all types of administrative focused transactions.

Clearinghouses are accredited by the Electronic Healthcare Network Accreditation Commission (EHNAC). This commission has extensive criteria from best practices to assess an organization's effectiveness. The criteria cover a wide range of areas such as customer service, operations, marketing and HIPAA privacy and security. EHNAC accreditation assures a minimum standard of service and performance from the clearinghouses. It is notable that several banks have secured EHNAC accreditation for their lockboxes.

The Medical Banking Project, a membership-based organization supported by 65 entities that include national banks, healthcare organizations, government and universities, has launched a new Gold Seal Accreditation Program. This program establishes a standard to assure customers they are receiving services recognized as meeting the highest standards of data privacy and security compliance mandated under both banking and healthcare regulations, including HIPAA. Other banking authorities and regulations that apply to this area are the Financial Modernization Act of 1999 or the Gramm-Leach Bliley Act, Federal Financial Institutions Examination Council (FFIEC), Fair and Accurate Credit Transactions Act (FACTA) and PCI Data Security Standard. The Medical Banking Project coined the term 'medical banking' and actively facilitates industry initiatives linking banking and healthcare systems. New privacy and security requirements signed into law under the American Recovery and Reinvestment Act of 2009 (ARRA) are incorporated into the Gold Seal Program.

Some of the typical services that may achieve a Gold Seal include:

- Bank-based electronic health data transaction services
- New lockbox programs that offer health data management programs
- New credit/debit card programs that link banking and healthcare systems
- Banks/fiscal intermediaries that offer electronic and/or personal healthcare records
- Banks that offer account-based health savings accounts (HSAs)
- Healthcare ERA/EFT service areas
- Specialized healthcare lending programs
- Medical statement/print centers
- Other service areas that combine banking and healthcare systems.

This evolution, the convergence of banking and healthcare infrastructure, has created a firm foundation on which future healthcare initiatives and other medical banking applications can be built upon.

Claim Payment Solutions

After the claim has been prepared by the provider, and processed by the clearinghouse, it is submitted to the payer. If all goes well, the payer accepts the claim and determines that the service is eligible for reimbursement. This reimbursement involves sending both

information and money back to the provider. A claims payment incorporates both a remittance advice used by the provider to post the accounts receivable (the information) and a related funds transfer (the money). Funds can be moved from bank account to bank account through the use of paper checks or various forms of EFT. EFT can be made by either Fed Wire or ACH transactions. Only ACH transactions are suitable for electronic claim payments. The ACH system also plays a role when patients pay with credit/debit cards. While patient payments may originate in credit card or debit card networks, the financial settlement between the card processor and the (merchant) provider is always by an ACH credit.

Claim Remittance Solutions

Funding from a payer is accompanied by information explaining what is being reimbursed. In a paper world, there is no national standard for EOBs or remittance advice paper documents. Naming conventions and the layout of information differ radically from payer to payer. Some payers developed proprietary electronic remittance information files in the 1980s. Due to HIPAA, the vast majority of electronic remittance information is currently sent to providers in the ANSI X12 835 format. The HIPAA implementation guide to that specific transaction contains both required and optional data elements. Data elements must include the patient account number, provider number, date(s) of service, the amount paid, amounts not paid and reasons for discounts or short payments.

In a paper-only system, a 'check' with a printed statement explaining what claims are to be paid is generally referred to as an Explanation of Benefits (EOB) or an Explanation of Payment (EOP.) The provider posts this account information in the practice management software system or patient accounting system, which can be a very labor intensive process. The use of the 835 ERAs eliminates most of the problems of non standardized data elements. Because the use of the 835 is new to many payers, some issues of interpretation exist from payer to payer. Some payers' ERAs may be considered faulty by providers and may require editing or mapping. Providers receiving ERAs from multiple insurance plans with these unique mappings may result in a difficult posting task. If each incremental payer agreement necessitates an additional data mapping exercise, this lack of standardization increases overhead expenses. The industry clearly needs to improve quality as measured by adherence to the 835 standard.

Integrating Banking Transactions

Introduction

Financial institutions play a significant but behind-the-scenes role in healthcare. All money must pass through a bank to complete a transaction. A few banks act as claims clearinghouses and far more act as lenders and payment processors. They perform many technological functions that are beneficial to the provider. Below is a list of services provided today by financial institutions and used by healthcare enterprises.

1. Re-association
2. Lock box services for retail (patient payments) and wholesale (health plan payments)
3. Online bill presentation and e-payment solutions
4. Consumer driven health plans (health savings accounts)

The Re-association Challenge

Feature Description

Re-association is the process by which providers reconcile and match funds and data that are sent separately. The task of re-association does not exist in a world of paper checks and paper remittance advices. In a paper world, checks usually accompany remittance information and staff can readily determine that the check amount matches the total amount paid referenced on the paper remittance advice. In a traditional lockbox environment, the bank deposits the check and often sends a photocopy of the check with the remittance information to the provider. The provider's staff then reviews the documents in the traditional process, comparing the remittance advice total amount to the check copy total amount.

Doing business electronically may provide substantial benefits to a provider but may add complexity when payers separate data and dollars. There are many options available for payers to send ERA or EFT, each with its associated costs and benefits for the payer and the provider.

Ironically, a payer's decision to send all remittance information electronically can increase provider workload. When a payer opts to send data electronically, the remittance information may no longer be available on paper for the posting staff to read and compare to the paper check. As the X12 835 EDI file is a string of data and delimiters, reading of the file by non IT staff may be difficult, even if printed on paper. Some providers use a program that turns the 835 into a human readable file and key enter the data rather than using an automated posting routine. Some banks and vendors distribute both paper and electronic imaging storage and remits. Additionally, these payers typically provide a pdf file of what is printed from online or a delimited file for the provider to download or print. This option provides the proprietary data access of paper payment documents transformed into electronic files. Some banks provide printed remittances which are needed by many providers. Also, some banks offer a similar service, using the electronic 835 data to produce an EOB document whose layout is familiar, and provide only one claim per page, thereby easing the provider's secondary filing.

Another issue of electronic transmission is that of timing. The problem of re-association is compounded by the fact that payers may have production schedules where the check or EFT may arrive days later or earlier than the 835. This means the information and the money will arrive separately, perhaps separated by several days. This complicates the re-association task. Providers whose banks do not provide an automated re-association service must perform extensive searches using spreadsheet reconciliation logs to ensure

that all payments received are properly credited. This problem does not exist when the remittance advice arrives in the same envelope as the paper check. As with all-ERAs, an initiative to streamline processes may increase clerical workload.

Re-association between payment and ERA can be substantially automated by various bank services. This does require knowledge and understanding of how banks capture information and report it to their customers. Providers must learn to utilize bank data capture and reporting tools so that bank reports can be reviewed to match ERA and check payments. This can be done manually or in an automated fashion with banking services developed for this need over the last 20 years, which are fully supported by the ANSI ASC X12 835 standard as well.

The key to re-association is matching data that accompanies payment with data that accompanies remittance information. The 835 contains a trace segment, a field of information expressly designed to support re-association. The trace segment contains a unique number that is within the remittance advice and is identical to information accompanying payment. In the case of a check, it may be a check number. In the case of an EFT, it will be an EFT identification number plus other information; this depends on how much additional information the payer sends the provider through the banking system.

Providers performing manual deposits to a bank account that lump multiple checks into a single deposit must manually review bank images to find the check in question. The challenge facing the provider is how to work with its bank to capture and report data on a check or in an EFT and facilitate reporting and re-association tasks. Providers whose banks capture check number, date and dollar information for reporting can obtain more granular data for re-association in an automated report from their bank. That same reporting functionality can pass information sent with EFT so all payment transactions are reported in one place for re-association, with ERA sent separately.

This section provides a further explanation of how data moves using EFT. There are two ACH formats authorized for use in the HIPAA implementation guideline for the 835 transaction: CTX and CCD Plus (CCD+). The CTX format is supported widely in the banking industry for B2B payments. It allows for a funds transfer and the inclusion of remittance data in the same file. The CCD+ enhances the CTX with an “addenda record” for transmission of limited X12 information. This addendum facilitates re-association. Both of these transactions are used for the two X12 payment standards, the 820 and 835. They provide the overwhelming majority of B2B EDI payments in the United States.

When payers use these two authorized ACH formats specified in the HIPAA implementation guideline, banks can assist in automating the provider’s re-association challenge. If the banking system is used to deliver ERA data via the CTX format, the bank service includes the step of reconciling the dollar amount deposited in the funds transfer with the information provided in the 835 transaction. When the bank provides this service, there is no re-association challenge for the provider.

When funds are sent separately, re-association is accomplished through what is called the Trace (“TRN”) Segment in the 835 transaction file described earlier. The NACHA CCD+ format contains the TRN Segment that is identical to the TRN segment sent in the 835, which is delivered either directly to the provider or through a clearinghouse. Banks may receive an ERA on behalf of the provider and store the ERA (the information) until a matching EFT (the money) arrives. Once both information and money are in hand, the bank then delivers the 835 transaction file to the provider for posting. Some payers also send the header information of the 835 in the CTX format. While this still requires “re-association,” the additional information in the header area of the 835 identifies the payer more completely and may provide the contact name and phone number should something go wrong with the transaction.

In some rare cases where the monetary amount is different from the ERA total, the bank can adjust the paid amount total in the 835 file to reflect the funds transfer. In all cases, the provider is passed a file that can be posted with no manual re-association tasks, fulfilling the goal of EDI to move data between payer and provider without human intervention.

Banks can offer a Web based view to see the status of the 835 files being held. This allows providers to check on pending claim settlements that have not been funded.

Benefits to the Provider

- Bank reporting supports manual re-association of check and EFT to ERA for providers with limited ERA transaction volume.
- Higher value added re-association services eliminate the labor intensive re-association service that is outsourced to the bank.
- The accounts receivable is not updated until the money is deposited in the bank.
- The provider has a Web based view(s) of their held and released activity:
 - 835s received without payment
 - Payments received without 835s
 - Payments released for processing (by match or default)
 - History report
- The provider will have faster notification of denials. This earlier notification enables the provider to begin an appeal sooner, reducing A/R aging.

Patient / Retail Lock Box

Feature Description

A good percentage of all patient payments today are still paid by the patient using a document sent in the mail by the provider. The document sent by the provider could be a statement or third party letter that contains a perforated stub also known as a coupon. This coupon contains information that will be used for re-association of the payment with the accounts receivable file. Information such as the patient number, payment amount, and statement date and patient type (inpatient or outpatient) is located on the payment coupon or stub. Often, this data is incorporated in a row of numbers and letters known as

the OCR scan line if needed by the provider's posting process. The patient mails the coupon along with the payment (check or credit card information), in a return envelope to a post office box rented by the bank.

The bank collects the envelopes from the post office and scans each document. In high volume situations, extremely automated high speed equipment is used. Checks are endorsed and deposited and images of the checks and statements are created. An electronic file is produced, conveying information that matches the amount of the deposit with the data on the payment coupon. This file is sent electronically to the provider who, in turn, updates the information in the Accounts Receivable system. In the end, the money is available to the provider and the Accounts Receivable balances are reduced.

One benefit of this scanning service offered by banks is that the lock box documents are available on a bank's specified Web site for the provider's viewing and downloading. Alternatively, banks may send them to the provider as well. In turn, the provider may download these image files into their imaging system. The document sent electronically by the bank is an 8 ½ x 11-inch document containing the envelope, check and stub/coupon. This can then be used by the provider to automatically file a copy in the patient's folder and a generic pay date folder. The provider utilizes the file at this point for collection purposes.

Benefits to the Provider

- The accounts receivable ledger can be updated at the same time the money is deposited and available in the bank.
- The labor intensive process of opening envelopes, creating a deposit slip, and updating the receivable is outsourced to the bank.
- Outsourcing the processing to the bank saves one or more days for depositing the money and updating the Accounts Receivable.
- Experience demonstrates a 99% accuracy rate with the bank's lock box process.
- Lock box services offered by the bank can perform the following functions:
 - Create the patient payment from the check so that it can be posted by the provider
 - Post a comment that contains the patient's check number (from the MICR encoded line on the patient's check) or the patient's credit card information.
 - Create the credit card deposit and give the credit card information on the electronic file so that it can be posted at the credit type level (American Express, Visa, MasterCard, etc.).
 - Create the prompt payment discount from the date on the scan line.
 - Eliminate manual intervention except when dealing with exceptions (for example, patient does not return the coupon).
 - Send an electronic image and image index along with the payment file to update the document imaging system.
 - Using the banks image platform, view all source documents used to create the electronic file and research any errors. The Web site also has a separate section for correspondence scanned.

- Use of one lock box for multiple providers, which saves monthly recurring costs to providers. The bank can create separate deposits from an identifier on the document's scan line.

Insurance / Wholesale Lock Box Using Intelligent Optical Character Recognition (IOCR)

Feature Description

Most of the major non commercial insurance companies produce 835 transaction files electronically. Examples include Medicare, Medicaid, Blue Cross Blue Shield, as well as major commercial insurance payers like Aetna, Cigna and United Healthcare. All health plans are mandated under HIPAA to produce 835 transaction files electronically.

However, a significant number of payers do not send electronic 835 files. Many have legacy systems that cannot produce the information to make the files HIPAA compliant. Some workers' compensation and property and casualty companies were exempted from HIPAA and remain paper-based. Some payers also provide more information on the paper EOB than on the 835.

Banks have created a solution for managing payers' paper EOBs by using sophisticated scanners that can take the paper EOB and create an 835 data file from the EOBs scanned image. This service may utilize the provider's claims files, which are obtained from the bank to supplement the data in EOBs that lack service codes located on the original claim. Additional value-add functionality stems from the bank's support of the ANSI X12 codes used to explain why a claim is denied or not paid in full. Under HIPAA, the 835 file must provide two codes: the Claim Adjustment Reason Code (CARC) and Remittance Advice Remark Code (RARC). However, some of the smaller payers, with legacy systems, do not provide this information in a HIPAA compliant format. These scanning solutions will take a paper EOB, recognize the payer's old proprietary adjustment reason codes and translate them into data that conforms to HIPAA standards.

From these files and the paper EOB, banks can create a HIPAA compliant 835 file (with line item detail) and send it to the provider for processing just as if it were created and sent by the payer.

Benefits to the Provider

- Automates the manual posting of EOBs, which saves time and labor costs.
- Allows the bank to create an 835 with payments and denials to support a standard integration to accounts receivable and to capture denials in a standard way for all payers.
- Allows synchronized updating of accounts receivable with the payer's check deposits to simplify the bank statement reconciliation.
- Outsources processing to the bank saves one or more days for depositing the payer's check and updating the accounts receivable.
- Demonstrates 95% accuracy rate with the banks lock box process.

Lock box services offered by the bank or healthcare technology vendors can perform the following provider integration functions:

- Create a new template when a payer sends a new EOB form.
- Provide an automated interface to the provider's denial management system.
- Eliminate any manual intervention except to deal with the exceptions.
- Send an electronic image along with the payment file to update the document imaging system.
- Use the banks image platform to view all source documents used to create the electronic file and research any errors. The Web site has a separate section for correspondence scanned.

Online Bill Presentation and ePayment Systems

Feature Description

Today, banks (allied with vendors) offer a solution for putting the provider's statements online for viewing and allowing the patients to make their payment through a Web site. The bank offers a Web site with the same color scheme and logos as the provider's Web site, and the payment terms available to the patient. The patient logs on to the provider's Web site, can review a statement, and with a click, will be taken to a secure Web site to make a payment.

Payments are typically made by debit or credit card. At day's end, the bank sends an electronic file to the provider for integrating the payment and payment terms. Banks will also make available an image of the financial terms from the Web site for filing in the provider's imaging system.

Benefits to the Provider

- Solution to capture payments. Many patients prefer to pay on the provider's Web site or at a kiosk at the provider's physical location rather than send a check to the provider's lock box. At some point in the future, there will be more payments made by the patients this way than through the lock box. This process defines the payment terms and methods upfront and they are posted on the Web site.

Consumer Driven Health Plans

Feature Description

CDHPs are high deductible health plans that combine the availability of tax sheltered funds called Health Savings Accounts. The banks play a major role in CDHPs by maintaining the bank accounts for the individual subscriber, which are usually tapped through the use of debit cards. From the bank's standpoint, these accounts are checking accounts with debit card access. The normal way of depositing money into the account is through a payroll deduction.

The patient subscribes through a payer to a plan that authorizes providers to either view the account for available funds or extract funds from the HSA to pay the patient obligation.

Benefits to the Provider

- Monies are available to pay the patient obligation by the subscriber. The subscriber uses his card to pay the provider.
- Payers, when the final bill is produced, will adjudicate the claim and if authorized by the subscriber, will take the funds from the HSA account. This is known as integrated financial settlement. Some payers will combine it with the payer's contribution to the total reimbursement payment. A CARC should be used to identify the patient payment amount of the CDHP payment. The provider must take the amount of the CARC out of the total payment and post the insurance payment to the insurance plan and the patient payment to the patient obligation.

Future Predictions

In response to the rising cost of healthcare and the added emphasis on quality of care, healthcare providers are integrating Web-enabled/electronic solutions in to their administrative, diagnostic assessment and care plan protocols. These new developments necessitate a fresh look at existing solutions and an understanding of gaps and security and privacy concerns. HIPAA took a necessary first step toward a set of standards for protecting patient information. This has fostered a level of collaboration and cooperation between the public and private sectors, as well as between healthcare providers and the technology and service vendors.

Financial institutions provide services for payment clearing and settlement to the healthcare industry. With these services comes the responsibility of being a "trusted party." Such a role requires compliance with regulations designed to protect clients' information and the added interest of giving the assurance of payments. What is new is the nature of Web-enabled electronic transactions and the use of the Internet. These new conduits require a higher level of security management to not only protect payment transactions, but also the data associated with the transaction, commonly referred to as remittance information and paid claims data describing financial transactions.

Future Considerations as Financial Institutions Conduct Web-enabled Payments

Assurance of payments is the core business service that financial institutions provide to their customers. Payments are delivered and processed over multiple payment networks, utilizing diverse solutions such as the conventional paper check, images of paper checks, direct wire transfers, ACH transactions and debit/credit cards. Financial institutions and the Federal Reserve know that on the horizon, the use of alternative electronic means of facilitating payments offers challenges the industry must meet to perform the vital function of ensuring reliability of payments. If the payment system is challenged in any way with security, privacy or corrupted data, the general public's trust and confidence in

the payment system is lost. The increase in the number of Web-enabled or Internet solutions for payments now processed by financial institutions has changed the infrastructures of payment networks. These networks focus on the interoperability and integration of Web-enabled transactions to provide services facilitating ‘straight-through-processing’ (STP). As industries move to improve efficiency and provide cost reduction, demands on banking services for multiple payment solutions increase. This also creates further interest in automating the clearing and settlement processes of these payment networks. One aspect noted in this paper is that the current EDI solutions were designed and are utilized today in a ‘portal or proprietary’ environment. However, the industry is experiencing a proliferation of Web-enabled solutions utilized over the Internet. The Internet is designed to easily and cheaply share data between two partners; it is not engineered with the security and privacy functions financial institutions are mandated legally to provide for their customers. The problem of corrupt transactions does not occur if data sharing is between partners in a network bound by either contract or negotiated agreement. But when the data is shared across networks or communities of ‘trust,’ there must be a neutral party providing for the mitigation of risk as related to the assurance of payments. Financial institutions are facing a multitude of emerging Internet payment solutions and bear the responsibility of assuring payment security using these new solutions. An increasing body of study and evidence is emerging that attempts to provide a framework of policy and rules governing these transactions. Additional industry discussion is anticipated to be devoted to the enforcement of these rules and policies, which will enable more secure Web-enabled payment solutions.

Payment Challenges for Financial Institutions

This section of the paper outlines the same basic principles of payment processing. In the future, these principles should be discussed in a collaborative environment with both public and private sector participants focused on healthcare related transactions.

Financial institutions share with healthcare providers the role of ‘trusted party’ and are subject to legal and regulatory requirements to provide clients with security and privacy. It has been noted in a number of Standards Bodies (ANSI X9/OMG) and ‘Proof of Concept’ Consortia (Financial Services Technology Consortium/ FSTC) that the role of financial institutions is to:

- Provide for the risk of identity management
- Provide for mitigation of risk in Web-enabled transactions
- Provide for the assurance of payments.

Identity Management and the Use of “Credentials”

Financial institutions have a 300-year history of being able to identify clients through various technologies. Today a “credential” is an electronic method linked to a set of protocols verified to be accurate and recognized when coordinated under a set of agreed upon policies. With these credentials, a ‘Trust Network’ can be formed. This Trust Network can then facilitate the exchange of documents and other information. Consortia

such as the ‘Liberty Alliance’ have developed a *trusted framework of assured identity* which financial institutions and such standards bodies as the American National Standards Institute (ANSI) have agreed to use in development of governance of Web-enabled transactions.

The important part of the presentation and acceptance of a ‘credential’ is within the beginning of the transaction to establish a ‘mutual authentication’ between the two parties and to mitigate the risk of fraud. Generally speaking, the strength level of the credential should be directly related to the value or risk of the transaction. The use of user identification (User ID) and ‘Password’ are known to function well in a closed network and perhaps in a set of low value Web enabled transactions. Higher value transactions managed by financial institutions operating in multiple venues must be mapped to the level of risk. To facilitate understanding the concept of mapping the level of risk to the strength level of the credential, the National Institution of Standards and Technology (NIST) has published “NIST 800-63” as a standard for running of four levels of defined risk:

- Level 1: Low value, perhaps User ID and Password would suffice
- Level 2: Low value, but deemed to require PIN/Password
- Level 3: High value and business risk, requiring mappings to determine for the enterprise, a set of multiple digital solutions
- Level 4: High value, mapped to require strong credential solutions.

The types of credentials being considered by financial institutions to provide the appropriate level of strength are:

- Biometrics
- Web Services (WS) Federation
- Liberty Alliance, SAML 2.0
- Public Key Infrastructure (PKI) Certificates
- Shibboleth.

In a group of rich and diverse payment networks, the appropriate strength level of credential is necessary for an application providing a payment solution. The necessary credential must be presented and accepted. It must be based on a trust network that provides assurance of identity and is based on a set of rules and policies. These policies must be articulated, understood and enforced.

Standards will provide the required interoperability and integration for financial institutions to provide the appropriate level of service, privacy and security. Standards will support providers in processing multiple Web-enabled solutions across multiple networks and multiple applications. Financial institutions recognized that a more public/private collaborative environment is necessary. This type of environment will support testing high volume payment transactions and developing benchmarks, methods and standards. These standards will ensure the desired service level across multiple industries is provided. Healthcare as an industry provides such an environment and the

focus of this section is to illuminate and promote a more “cross-industry” set of activities, which might involve multiple venues. Additionally, the transaction chains or points of healthcare involve multiple industries. Payment is one part of that transaction chain and it crosses multiple industries as financial institutions provide payment services to many components of the healthcare sector.

Technology Advances

- Technology will continue to grow ten fold in the next 20 years.

Payer / Provider Systems

- Payers/providers will no longer use the excuse “I have a Legacy System” to not be able to support the HIPAA transactions. The cost is a major issue surrounding the implementation of the X12 transactions under HIPAA.
- Real Time Adjudication (RTA) of 837 Claims. RTA is used in the payment of pharmacy claims today. It is anticipated that many payers will allow physician’s RTA when they enter the claims online.

Payers

- Payers are anticipated to move from legacy systems in the future.
- Personal health record information is anticipated to be transported from payer to payer using X12.

Networks

- Traditional methods of connectivity such as FTP and VANs will be replaced by the Internet.
- Banks are investigating the use of ATM machines for moving the health record.

Terminals / Products

- Kiosks are being introduced to streamline patient registration processes. Kiosks are used to collect money at various registration areas.
- Scanning devices for credit cards and debit cards to allow the capture, deposit, processing and integration of patient payments.

Consumers

- Some insurance companies allow their members to have access to their health records online. When a member changes insurance plans, the X12 standard transaction allows insurance companies to exchange information electronically.
- Electronic health records have been endorsed by the Federal Government to reduce the administrative costs of healthcare.

Frequently Asked Questions

Question: As a provider, if I want to take advantage of the services described in this document, what do I need to consider?

Answer: To outsource the services to the bank and the vendor, you need to know their costs versus the savings and additional automation features provided by the service.

Return on investment items include:

- Cost for the FTEs performing the function
- Speed to manually process versus the automation
- If imaging is involved, the cost of manually imaging versus automatic filing
- In the case of lock box and ePayments, the timing of the deposits.

Question: As a provider, if my bank does not offer these services, can I get them from another bank?

Answer: At the option of the organization's management, they may contract with a separate bank or healthcare technology vendor for just that service. The relationship with the bank normally is the determining factor.

Question: Do all banks offer the services described in this document?

Answer: If a bank has committed to understanding and providing services to healthcare institutions they may provide all or more of the services described. More and more banks realize the need to support their healthcare customers with services like the ones described in this white paper. Many smaller hospitals will utilize the lockbox services of a bank rather than develop mail and check handling and EOB imaging and conversion to 835s themselves.

Question: Do banks have healthcare representatives?

Answer: The larger banks have healthcare divisions with treasury management representatives that support the services described in this white paper.

Question: As a provider, will my bank work with my hospital information system (HIS) department to implement the services?

Answer: Different vendors have different integration solutions. Contact your HIS vendor to see if they can receive a file from the bank and create the integration transactions you require (example: post payments, prompt payment discounts, payment type, etc.).

Table 1 – Revenue Cycle Diagram for an Institutional Provider



Table 2 – HIPAA Transactions and Code Sets

Providers	Transaction Standards	Payers	Employers
Eligibility	<p>270 Eligibility Inquiry →</p> <p>271 Eligibility Response ←</p>	Enrollment	<p>834 Enrollment ←</p> <p>820 Premium Payment ←</p>
Referrals Authorization	<p>278 Referrals/Authorizations ↔</p>	Referrals Authorization	
Claim Submission	<p>837 Claim →</p>	Claim Acceptance	
Claim Status Inquiry	<p>276 Claim Status Inquiry →</p> <p>277 Claim Status Response ↔</p>	Claim Status Response	
Accounts Receivable	<p>835 Claim Payment ←</p>	ERA/EFT	

Glossary of Terms

Term / Acronym	Description
835	This is the ANSI ASC X12 transaction set code number for the transaction set called the “Claim Payment/Remittance Advice. The 835 can be used to initiate a payment or send a remittance advice or both, together or separately.
837	This is the ANSI ASC X12 transaction set code number for a national standard used as a standard format for electronic claims. Providers use the 837 file to submit billing and encounter information to payers. They send it either directly or via intermediary claims clearinghouses. Payers use the 837 to transmit claims to each other.
ASC X9	Accredited Standards Committee X9 (ASC X9) has the mission to develop, establish, maintain and promote standards for the financial services industry in order to facilitate delivery of financial services and products.
Bank / Financial Institution	Used interchangeably.
Document Imaging	Process where paper documents (claim forms, checks) are scanned and stored electronically.
Denial Management	Denial management is a process in which providers deal with remittance transactions indicating a claims denial or underpayment. There can be denial management software tools to automate the denial management process to track and monitor denials. The X12 835 code sets for claims adjustments are used by payers to describe to the provider the reasons for denial in an 835 Electronic Remittance Advice.
EBPP	Electronic / Online Bill Presentment Payment is Web accessibility to statements for viewing and making payment.
EDI-Capable	Banks who have electronic data interchange solutions.
EFT	Electronic Funds Transfers can be made in two ways. The first is called FedWire and it is a real time transfer of funds from the Fed Account of one bank to the Fed Account of another. ACH or automated clearing house transactions are more similar to checks in their cost and timing. They are “next day” items and can be used to send both electronic funds and remittance and trace number information in X12 standards between payers and receivers.

Term / Acronym	Description
EOB	Explanation of Benefits of payer's claim adjudication that is sent to the patient. This term is often used by providers to the remittance information sent to them in a paper claims payment.
ePayments	Payments made by the patient or authorized hospital staff using the provider's Web site.
ERA	Electronic Remittance Advice is an electronic file that is sent from the health plan payer to the provider that can be used to post and close accounts receivable. The X12 standard for electronic remittance information is the 835 standard.
FSTC	Financial Services Technology Consortium members, including financial institutions, other industry groups and vendors collaborated in non-competitive research and development of interbank technical projects.
HIPAA	Health Insurance Portability and Accountability Act of 1996 that among other things required the Department of Health and Human Services to promulgate healthcare transaction standards for the automation of the claims process.
HIPAA Transactions	Electronic standard transactions that were approved for use under the HIPAA legislation. They support the steps in the revenue cycle and automate the workflow. HIPAA Transactions apply to insurance payment transactions only. Financial institutions use both the 835 and other X12 and industry standards to facilitate funds transfers and bank reporting.
HRA	Health Reimbursement Account
HSA	Health Savings Account
ICR / IOCR	Intelligent Character Recognition / Intelligent Optical Character Recognition. Used to create templates to read the data off the paper EOB. It is used to convert a paper submission into a HIPAA compliant 835 electronic file.
Image Vendor	Vendors who provide the IOCR technology
Insurance / Wholesale Lock Box Service	A bank lock box that receives EOB and checks from the insurance company to cover their portion of the patient's claim. It receives paper documents and uses IOCR/ICR image technology to create the 835 electronic file.
MSA	Medical Savings Account

Term / Acronym	Description
OMG	Object Management Group is an international open membership, not-for-profit computer industry consortium. OMG Task Forces develop enterprise integration standards for a wide range of technologies, and even wider range of industries.
OCR	Optical Character Recognition is used to read the scan line on a patient's statement and MICR line on the patient's check
Payer Template	Created by the IOCR image vendor to retrieve information from the paper EOB to create the 835. The bank account number or payer logo on the payer's check is used to retrieve the payer template.
Patient Friendly Billing	HFMA Initiative to make the statements sent to the patient easy to understand. It provides guidelines used by forms vendors when creating a patient statement.
RA	(Paper) Remittance Advice is a common term used by the healthcare community to typically refer to a paper document containing the results of the adjudication/payment process sent from the payer to the provider. This term occasionally is also used for the electronic remittance.
Re-association	The-process to match the check/EFT number and dollar amount on the 835 to the related financial transaction.
Revenue Cycle	Time from scheduling a patient visit (or emergency) through treatment, billing, collection of payment, to account closure or account write-off.
LAP	The Liberty Alliance Project is a consortium of commercial and non-commercial organizations working to support the development, deployment and evolution of an open, interoperable standard for federated identity management.
X12	The ANSI (American National Standards Institute) Accredited Standards Committee (ASC) X12 was chartered in 1979 to promulgate national standards for corporate document exchange needed to conduct EDI. There are hundreds of X12 standard electronic document formats called transaction sets. These include transactions used by financial institutions, providers and payers, some of which are mandated by HIPAA.



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