

### Abstract

The convergence of technology, business processes, credit practices and other resources in the nexus of healthcare and banking has yielded a new industry niche. This nascent market development was originally defined and referred to as “medical banking” by the author in 1996, who facilitated the formation of a civil society organization and community under the auspices of the Medical Banking Project in 2001, now a division of the global HIMSS organization. In this article the author expands upon an earlier work (*The Rise of the Bank Infomediary, Casillas, 2007*) to suggest that banks and financial institutions, teamed with health data management firms, are developing along multiple commercial fronts to develop inter-organizational systems and convergence of infrastructure; primarily along privacy and security, revenue cycle improvement, “health-wealth programs” and a quickly evolving arena called “advanced community care platforms.” An observation is made that an open technology harness could fuel greater momentum that benefits stakeholders by efficiently organizing disparate data streams, technologies and business processes across banking and healthcare operating areas in a manner that optimizes research and development and new application launches. The author further suggests a social imperative for creating a “medical banking ecosystem”.

MEDICAL BANKING REFERS TO A BROAD SERIES OF EMERGING BEST PRACTICES that result from the convergence of banking and healthcare systems with the purpose of improving healthcare cost and access. The linkage of banking and healthcare systems to form inter-organizational systems (IOS) largely conforms to IOS theory as developed by Dr. Benn Konsynski (*Inter-organizational Information Sharing Systems, 1984*). Prime IOS examples are SABRE (the airline ticketing system), Baxter’s ASAP (medical supplies system) and others.

By applying IOS theory to healthcare and banking I created thought leadership around cross-industry platforms and best practices.<sup>1</sup> Since that time, medical banking IOS formation (or “M BIOS”) is occurring across multiple functional areas, including:

1. Payment and remittance management and processing

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<sup>1</sup> The formation of The Medical Banking Project acted as a catalyst to deliver thought leadership around these emerging models, aggregating the first industry-recognized community in this area. The central tenet of this movement continues to be a social goal: to convert \$35 billion in systemic inefficiency to charity care by digitizing the paper chase in payment channel. My work has been to both produce original content and to socialize it within government, commercial and academic venues. This has been successfully accomplished in numerous venues: testifying before NCVHS and ONC, advising HHS, OCR, OCC, HHS, FDIC and other agencies on policy issues, serving as a contracted author to write and define legal issues for LexisNexis (writing Chapter 8 of the LexisNexis 4 Volume “Health Care Law Treatise”) and socializing this message among top banks and thought centers like Vanderbilt Center for Better Health, University of Minnesota’s Carson School of Management and others. HIMSS MBProject will now generalize our message to benefit domestic and global audiences. Thus our social objective can be implemented across a wide range of regions and cultures which is very exciting for me personally and professionally.

2. Health data transaction management beyond payments (claims, authorization, secondary billing, etc)
3. Denial management and contract management
4. Business intelligence dashboards and analytics that gauge multiple areas of the revenue cycle and general enterprise metrics as well
5. Specialized credit programs that target consumers/patients
6. Card-based platforms that implement credit programs and link to a series of “account-based plans” like HSAs, FRA, etc.
7. Receivable financing and/or funding programs and services that emerge from tighter data access by credit-granting organizations (banks, leasing firms, etc)
8. A broad and growing array of ARRA/HITECH-based financing programs
9. Adaptation of online banking platforms to accommodate an increasing array of consumer-focused health and lifestyle programs, tools and resources (“health-wealth programs)
10. Utilization of bank branches to deliver lifestyle programs into the community
11. Other areas

The emergence of medical banking as a strategy to link bank-based investment, systems, infrastructure, processes and people to advance health and healthcare between two community anchors – banks and healthcare providers – was my core thesis in 1996, developed after a survey of over 100 community and national banks over a period of 15 months in 1995. In 2001, The Medical Banking Project created a focused effort in this area, launching a think tank to facilitate medical banking convergence. The Project oversaw the creation of other mission critical assets like The Medical Banking Institute, a neutral, cross-industry forum, and instituted an advisory council of industry experts to oversee content. The Institute offers a much needed venue to discuss policy issues and to showcase best practices in this emerging area.

Medical banking is being discussed in multiple forms across the industry. After setting the stage through the creation of policy roundtables (“The HIPAA Gang”), leading to invited public testimony by the National Committee on Vital Health Statistics and policy advisory meetings with HHS, the Office of Civil Rights, National Governors Association, as well as public meetings with participation or attendance by OCC, NACHA, ABA, Federal Reserve and US Treasury officials, the ideas have gained increasing traction.

Indeed, the advancement of new EFT, ERA and denial management standards in the senate version of the health bill, now signed into law by the Obama Administration, represents this new and growing reality (Section 1104 of HR3590). The new health payment focus areas at WEDI, EHNAC, CAQH/CORE, NACHA, TAWPI, The Clearing House, SWIFT, Federal Reserve Bank of Atlanta and other forums are a direct result of MBProject’s socialization of medical banking subject matter and provide testimony to the fact that medical banking offers a dynamic model for improving healthcare.

## **Overview of Emerging Best Practices and Trends**

Emerging areas of practice in medical banking may be classified into four areas:

1. Privacy and security
2. Revenue cycle improvement
3. Health-wealth programs
4. Advanced community care platforms

### *Privacy and Security*

Across all banking systems, privacy, security and confidentiality of data is mission critical. A bank or financial services company that cannot support the highest levels of data protection risks reputational loss that could lead to systemic deposit withdrawal and business cessation. For this reason the banking industry has over many generations prioritized data protection and privacy, making it a core competency area, and area of significant capital investments, across all bank operating units.

Leveraging systems, processes and procedures designed to protect and privatize data, specifically within medical banking programs is a key area of emphasis in medical banking. The implementation of programs that specifically comply with HIPAA's Privacy & Security Rules, as well as FACTA, Title V of GLB, PCI, Red Flag Rules and other regulatory areas, unique to banking and generally across multiple industries, is an area that has become increasingly visible in the banking community.

Because the area involves the input of all areas of the bank, and coordination of systems, processes and people across the enterprise across all product lines, the emergence of committees and governance mechanisms that oversee the activity and routinely audit (both internal and via third party) is a discrete focus area within the medical banking build out, as evidenced by HIMSS MBProject's Gold Seal self-assessment program. Compliance with regulations around health data protection has become a specialized area of focus within the operating areas of banking and financial services organizations.

### *Revenue Cycle Improvement*

Medical banking principles are fueling investment in new platforms that impact the cash flow of healthcare organizations, including health plans and payers, providers and other actors in the healthcare value chain. The impact is occurring in multiple ways. For example, the integration of new applications into lockbox programs creates efficiency for end users (hospitals, others). This includes adaptation of lockbox transport platforms that manage paper explanation of benefits, specializing technical features to support imaging, digitizing images and the creation and application of specialized data files, typically in the X12N 835 format, to automatically update patient accounting systems.

Lockbox platforms that perform these specialized tasks can also provide an online archive and retrieval capability for all incoming payments and remittances, the ability to automatically link outgoing claims and remittances to support secondary billing programs (coordination of benefits), specialized patient fulfillment generation and payment programs that integrate online banking programs, and specialized programs for denial management, contract management and business intelligence analytics. The forward movement of this technology model is to move up the value chain, augmenting workflow

automation routines and eventually supporting enterprise-wide decisioning for the healthcare provider. In addition the platform creates a critical lever for health plans that want to implement electronic payment and remittance programs with the provider community.

In addition to technology convergence, banks and other groups are seeking to implement specialized credit facilities into the platform using the data streams. This includes “advance funding” of healthcare claims (immediate payment of a submitted claim less a discount to offset wait time for full payment by a health plan). Besides business financing arrangements, lockbox specialization can also include financing consumer debt. Once the primary insurance plan pays, based on the credit policy of a hospital, the patient-owing balance may be calculated, and as the lockbox is the first point of capture for primary plan payments, it can provide business intelligence and logistics support for automating consumer payment programs and options for patients, all the way through to providing online banking options for payment (via bill pay).

Beyond lockbox, there is increased focus on executing payment of claims at point of service. This involves the “hotel method” (reserving prospective amounts owed in an account until charges are determined), bill estimation mechanisms based on prior history and other factors, and other methods. In addition to executing funds transfers, these platforms are integrating both financial and healthcare information databases to effectuate an end-to-end, seamless claim process at point of service or as soon as possible after treatment is rendered. These programs often link to card platforms that have been developed for financial payment purposes in the retail setting but are adaptable to the healthcare setting.

There are many other medical banking inter-organizational systems that are emerging in the marketplace that fit within the category of “revenue cycle improvement.” While these won’t be documented here, one area bears mentioning – the use of electronic funds transfer systems to improve revenue cycle.

In healthcare, moving payment and data is critical for streamlining workflow routines yet due to the limitations of current financial networks, and for other reasons (like systems preparedness to use financial electronic data interchange), moving both the funds and data may not be possible. The volume of electronic funds transfers that include an electronic remittance advise using the CTX transaction, for example, is very low compared to all healthcare payments. Yet one would expect that such transfers should happen more often than not in order to streamline workflow in the remittance management process.

As a result, there is a new conversation occurring in medical banking around the use of SWIFT, a global financial messaging system, for medical banking programs. SWIFT could move the industry closer to “straight through processing” in healthcare. In addition to SWIFT, coordination with the ACH and the Federal Reserve is required, however, the series of bi-lateral trade agreements to effectuate this type of high value efficiency system is already in place and used by other industries. Thus it is quite possible to create a new program for healthcare payments that immediately delivers impressive value via a much improved healthcare financial network.

HIMSS Medical Banking Project is leading idea creation and community dialogue to implement this type of solution set by providing a neutral gathering place and inviting the key actors. Our “G7” program, that convenes seven organizations in four key stakeholder groups – providers, plans, banks and employers – will help to define functions that the “healthcare financial network of the future” should support for all the stakeholders.

### *Health-Wealth Programs*

Health-wealth programs may be defined as the creation of programs, tools and resources that link healthcare costs with the “financial health” of individuals, families and groups. For individuals, the adaptation of better lifestyle practices can impact the lifetime spend on healthcare costs for chronic disease or other illnesses categories, and this could result in greater access to investments used for other purposes than healthcare in retirement age. So for example, if a 23 year old person that is obese lost X pounds, it may, based on the actuarial evidence, reduce lifetime spending on healthcare and add more discretionary income at retirement. In short, better health many times means access to greater wealth, or discretionary income.

Implementing this principle in everyday life compliments many employer-driven programs that seek to optimize human capital in the work environment (presenteeism, absenteeism). To support this objective, many employers implement resource, programs and tools that are available in a “health portal” yet employers suggest that use of the portal remains low and is generally highest once per year when employees need to make a plan selection.

A potential solution to this is secure linkage of the health portal with the online banking platform, used by almost 70 million households today three to five times per week for financial management. Linkage to the platform could help to train individuals to use health resources, much like banks speed adoption of other consumer tools, like ATM, online banking and even use of credit/debit cards and other banking instruments.

Some banks and financial technology companies have decided to walk down the pathway of increased “health-wealth” investments via access to a health record on the online banking platform, as is the case with Wells Fargo, or integration of an electronic personal health record onto an HSA management platform (FISGlobal). The inclusion of electronic record programs is portentous of a new and secure “home” for personalized health information – the online banking platform – making this a key growth area to watch in medical banking.

### *Advanced Community Care Platforms*

In some ways, community care platforms overlap the two preceding areas of revenue cycle improvement and health-wealth yet in other ways the emergence of this area of practice far surpasses their scope. Advanced community care platforms offer a venue with a series of resources that could impact population health.

Banks, in particular, are likely to become much more involved in community-oriented platforms because this orientation towards investment in healthcare is highly synergistic with existing investments and investment objectives to facilitate a healthy community. A strong and vibrant community in turn delivers a greater return in terms of deposit growth.

But should banks invest in communities in ways that do not directly show a return on investment? Are there indirect ways to invest in the community, targeting better healthcare and lifestyle programs? Studies indicate that investments into community health programs generally increase the economic vitality of the community. Investing in health-related programming makes good business sense for banks, who routinely invest in other areas (little league sponsors, school programs, charity causes in the community, street festivals, etc). Adding health-related programming to the mix may offer more than a good public relations return; it may be a good business decision. At least that's what some banks seem to think.

A pragmatic example of this is a southeast regional bank that teamed with a major hospital management company to develop a series of programs offered at bank branches. The branches, designed for ease of customer use, offer forums on stress management and other issues. The hospital brand is strengthened, the bank gains good public relations capital and individuals attending offer an audience for targeted bank messaging.

One group in Massachusetts is taking this a step further by creating integrated community programming, and an online coordination tool, that links key stakeholders, including the bank, into an end-of-life planning continuum for the community. The application that coordinates the disparate stakeholders, from banks to social workers, community clinics, lawyers and others, supports a community-wide programmatic approach. A key focal point is elderly care, to support planning in a manner that reduces stress during the last years of life, estimated to capture as much as 80% of the entire spend of an average person's lifetime healthcare bill. The area of mid-year baby boomers caring for their aged parents is a growing trend.

Another example of an emerging community care platform is a major bank that has opened up "Retirement Planning Centers" at the bank branch. The program integrates HSA planning, reverse mortgage financing mechanisms for end of life care and more.

Aggregation, coordination and better access to community health assets (many times using a convenient online application), where banks are a primary stakeholder, is the core concept of the advanced community care platform. The coordinated platform could use, as an adoption incentive, revenue cycle management tools for users (providers of care), health-wealth tools for consumers, card-based programs that track utilization across the community (emergency room, clinic, etc) and other programs and resources.

## **Future Trends**

The evolution of medical banking programs coupled with the emergence of digital tools in healthcare – from online applications to mobile or "mHealth" applications and integration with telemedicine business models and other areas – could enable a new

generation of programs that support the healthcare needs of the underserved areas of the world. Access to health records, leading edge pharmaceutical and treatment information that is evidence-based, community resources and funding at points of service where mobile phones can reach beyond hard-wired network infrastructure, can create a global platform to improve health and healthcare among many people groups.

In support of this idea, the geographic adaptation of bank-based platforms that serve multiple areas of the world, like treasury management, online banking, ATMs and other innovations, point the way forward for medical banking as an integral strategy used by the world groups (UN, World Bank, WHO) for meeting UN Millennium Development Goals. More recently a document signed by eight global health agencies in Geneva stressed the importance of four key areas, areas in which banking infrastructure can play a meaningful role – (1) increase levels of efficiency and investment in health information; (2) develop a common data architecture; (3) strengthen performance evaluation and monitoring; (4) increase data access and use.

Globalization of business models that are viable locally require implementation of legal, regulatory and technical models that are responsive to multiple regulatory authorities within a self-sustaining business formula. Banks, in contrast to the cottage industry-driven nature of healthcare, have created efficient technology programs that while focused on administrative excellence could adapt to more robust data transfer programs that are viable and offer remarkable potential to increase the use of health information technologies around the world.

Along these lines the next critical path issue for the facilitation and wider spread use of medical banking principles, practices and technologies in the marketplace is the creation of a common platform of standards and best practices with a quasi-formal governance mechanism that is given some level of government authority to speed adoption of standards, particularly in the area of data privacy and transaction standards. There is too much stop and go in the industry that fuels inefficient use of corporate resources. Beyond this, the potential creation of a technology harness, or the evolution of a preferred platform that can normalize data exchanges could vastly improve innovation in medical banking. Too many vertical specializations of technology seem locked into siloes that could be “harvested” using an “omnibus” technology grid to deliver value across the entire ecosystem.

Today, some of the largest cause-based communities and commercial firms in the world are starting to understand the potential of medical banking to foster creative innovation in healthcare.<sup>2</sup> The potential for international messaging systems like the SWIFT network, the adaptation of open source communities like the Object Management Group (OMG), the Healthcare Services Specification Project, Eclipse, NetBean and OASIS communities, and others, and the implementation of an open technical harness that can speed critical

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<sup>2</sup> While the term “disruptive” is eschewed by conservative bankers I believe it is truly required. We need to be clear – in healthcare, “disruptive” occurs when our system fails us, leading to preventable deaths (as reported by the Institute of Medicine). We must embrace *disruptive technologies* that act positively upon our healthcare system to truly change how we “do healthcare”.

mass adoption of technologies and business processes can lead to the creation of a new platform, and plateau, of much needed efficiency in healthcare. This, coupled with a governance mechanism that oversees the community in a neutral setting where all can participate or be represented through a membership program, can foster critical investment into an area that many agree is under-represented in budget planning today.

The opportunity to engage this area is compelling by many groups. Today, academia, commerce and government are taking notice of the medical banking arena and including it in legislative initiatives, standards communities and pilot activities. Recently a national institute was awarded a grant from the Agency for Healthcare Research and Quality (US) to implement a test program that explores the creation of an integrated personal healthcare record using medical banking principles. According to one of the researchers, who is a well-followed professor at the University of Minnesota's Carson School of Management, Dr. Stephen Parente, the adaptation of health information technology towards medical banking "is inevitable".

With the acquisition by HIMSS, the Medical Banking Project's initial goals have been met and future goals to create a global value are secured. We envision multiple programs, both domestic and global, that will enable much needed education and foster critical community development that will speed adoption of best practices in medical banking.

*John Casillas founded the Medical Banking Project in 2001 that was recently acquired by the global HIMSS organization. He serves today as senior vice president of the HIMSS MBProject division.*