Virtual Integration
A Technology Playbook for Hospital Executives

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Introduction

Alignment between hospitals and physicians is increasing daily as financial and operating pressures increase for both. Consequently, the current economies require these entities to consider consolidation and collaboration to ensure their viability. While physician-hospital alignment can take many forms and include a number of different components, information technology often is an important consideration within these transactions. At present, hospitals are making significant investments in healthcare information technology (HCIT). HCIT can serve as a unifying force to promote alignment or to act as a platform upon which to construct myriad strategies. From a managed services organization (MSO) to a fully accredited accountable care organization (ACO), HCIT is an important component in the process.

The important question is: Where does your health system stand in terms of its information technology integration, and does it have the complex and necessary tools for meeting the challenges that alignment brings to the drawing board?

Figure 1 – Health System's HCIT can Encompass a Wide Expanse of Physician Employment Scenarios
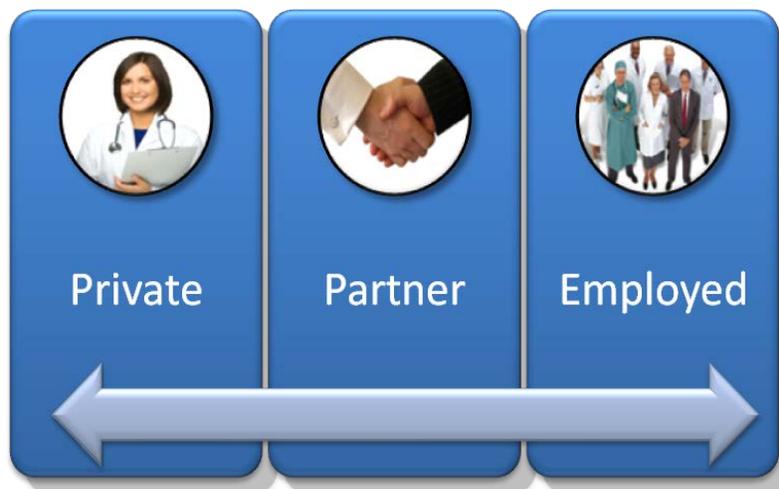
I.   The Driving Forces

Health systems of every size are preparing for an accelerated pace for HCIT adoption, implementation and increased influence in every part of the clinical, financial and administrative workflow. In this acceleration, the following key messages are becoming the hot topics within the industry.

- **Managed Service Organizations (MSOs)**
  - o Positive implication for physicians as the intent is to reduce the number of operational issues facing physicians today, allowing them to focus more on the clinical aspect of care delivery.
- **Meaningful Use (MU)**
  - o Financial incentives that facilitate the full integration of health records without compromising operational efficiencies.
- **Patient-Centered Medical Home (PCMH)**
  - o Enhances the value of primary care as the integration of quality, access to care, integration and coordination between healthcare providers and the availability of individual and population healthcare and information is established.
- **Quality Collaborative (QC)**
  - o A growing initiative aimed at improving healthcare and organizational efficiencies.
- **Clinically Integrated Network (CIN)**
  - o A clinically integrated network (CIN) brings together the hospital, physicians and other dedicated healthcare providers who deliver services focused on quality, performance, efficiency and value to the patient. Network providers develop and sustain clinical initiatives that enhance access to care, clinical quality, cost control and the patient experience by:
    - coordinating the continuum of care across affiliated caregivers, including employed, contracted and partnered community physicians

- implementing evidence-based clinical protocols to enhance patient outcomes
- establishing a meaningful set of quality measures to review clinical care and improve clinical performance
- achieving efficiencies in the delivery of care
- partnering with payers to develop contracts that drive definable clinical improvement and add value to patients

- **Accountable Care Organization (ACO)**
  - An accountable care organization (ACO) is a healthcare organization characterized by a payment and care delivery model that seeks to tie provider reimbursements to quality metrics and reductions in the total cost of care for an assigned population of patients.
  - A group of coordinated healthcare providers forms an ACO, which then provides care to a group of patients. The ACO may use a range of payment models (capitation, fee-for-service with asymmetric or symmetric shared savings, etc.).
  - The ACO is accountable to the patients and the third-party payer for the quality, appropriateness and efficiency of the health care provided. According to the Centers for Medicare and Medicaid Services (CMS), an ACO is "an organization of health care providers that agree to be accountable for the quality, cost, and overall care of Medicare beneficiaries who are enrolled in the traditional fee-for-service program who are assigned to it."[1]

However, recognizing and embracing these terms alone will not enable a health system to be successful in the current healthcare arena. Rather, an organization needs to be making deliberate, thoughtful decisions in response to the current changes taking place.

Until 2009, many public and private organizations held a loose understanding about quality care–driven models for reimbursement and alignment with physicians. Several recent federal have caused more organizations to place greater focus on quality and the need for alignments and partnerships that support that focus. In fact, the federal government, non-governmental organizations (NGOs), private sector professional societies, and a number of

medical associations have now created their own distinct definitions of quality, as well as guidelines for how an organization needs to respond to established quality expectations.

Overall, this enhanced focus on quality asks the following questions:

1. How can we as an organization do more with less?
2. How can we improve outcomes and quality of care?
3. How can we bend the cost curve, which is at an unsustainable rate? (See Figure 2)

Figure 2: Comparative Cost of Healthcare

If prices had grown as quickly as healthcare costs since 1945, then:

A dozen of eggs would cost: **A gallon of milk would cost:**   **A crate of oranges would cost:**

$55   **$48**   **$134**

II. How to Prepare for Alignment

Alignment can occur through an employed physician network, contractual agreements with individual physicians or groups of physicians, or a more formal MSOs that deliver services to employed or non-employed physicians, or a number of other structures. These structural models often serve as the foundation for more complex forms of clinical integration. In today's challenging economic environment, strategically aligning with the medical staff in conjunction with building relationships with community physicians is a major priority facing hospital executives. Over time, health systems have experimented with several different strategies to improve alignment with their medical staff. These included joint ventures, clinical co-management, and direct employment. As these models take shape, the

dependency upon technology proves more complex and costly from a resource and financial perspective. (See Figure 3)

Figure 3: Degrees of Investments in Technology

For example, employment has been a popular alignment strategy since the 1990s, and this remains true today. However, a key difference is that now this is not the *only* alignment model seen as viable. So while acquiring practices is not a new model within the industry, many physician practices have already made investments into an EHR system, which creates new challenges for the on-boarding process when aligning with a system (See Figure 4). In fact, these investments create challenges for many of the contractual relationships currently is use to align health systems and physicians; a common IT platform is becoming of greater importance in today's operating environment.

Figure 4: Hospital-Owned Practices

No EHR	Has EHR	No EHR

Has EHR
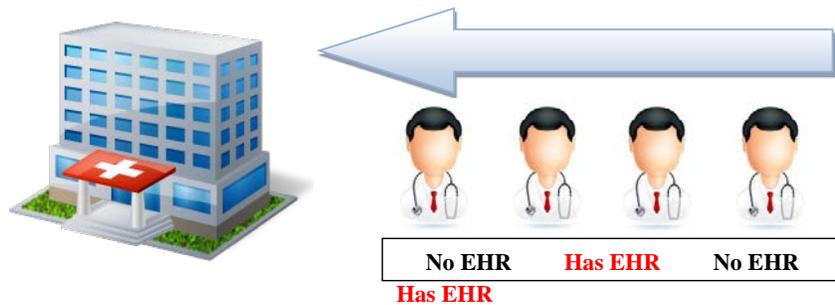
According to MGMA Between 2005 and 2008, hospital-owned practices surged from 25.6% to 49.5%[2]

In reviewing your medical staff alignment goals and required HCIT solutions, consider these factors:

- While physicians and hospitals treat the same patients, does it not also make sense to share health-related data on those shared patients?
  - The benefit: Electronic sharing of data can be more accurate and timely than any other method.
- What are the quantifiable benefits, (in terms of time and money) of eliminating data re-entry each time a patient is seen by a different provider in different location/ systems?
- What services, IT systems and processes will allow each physician to practice quality medicine that drives positive patient outcomes?
  - Having a patient's history of diagnosis, care, and medications can save valuable time for a patient presenting with stroke symptoms in the emergency room.
  - An available and comprehensive list of medications and allergies can be compiled and reconciled across several caregivers.
  - Ultimately can save lives, reduce costs, and improve the quality of care.
- What is the best structure for allowing providers to work effectively within the system's common technology platform and participate as part of the overall continuum of patient-centric care?
- What are the necessary data requirements to measure and reward provider contributions with financial gain?

- What is the best way to scale and budget the IT infrastructure to stay current, and meet market demands?
- How do we get our physicians to help us improve our quality scores to avoid financial penalties?
- How do you improve the overall patient experience and ultimately improve access to ancillary services?
- What options are available for sharing and transforming data into operational improvements and business intelligence?

Installation of erroneous technology or a poorly planned implementation can have a profoundly negative impact on provider productivity and the ability to deliver quality care. This factor can also erode trust and the ability to collaborate effectively, which is at the heart of most alignment initiatives.

Most physicians view alignment with a hospital as a positive opportunity to secure a better work-life balance and to lift many burdens, such as the management of complex IT systems for their practices. According to a recent Harris Interactive survey, 71 percent (%) of independent physicians are interested in working with their local hospital in developing an HER solution as the perception exists that the majority of hospitals have superior IT systems.[3]

However, not all inpatient IT systems and solutions are for ambulatory settings and not all are physician friendly. In general, hospitals have superior infrastructure, connectivity, security, and have investments that can be leveraged beyond just the IT needs of the hospital. Moreover, a hospital generally has superior buying power and can typically secure vendor discounts representing 30 to 50 percent off of the list price for software and services. Success factors and the accompanying common objectives are outlined below (See Figure 5).

Figure 5: Success Factors for IT Integration

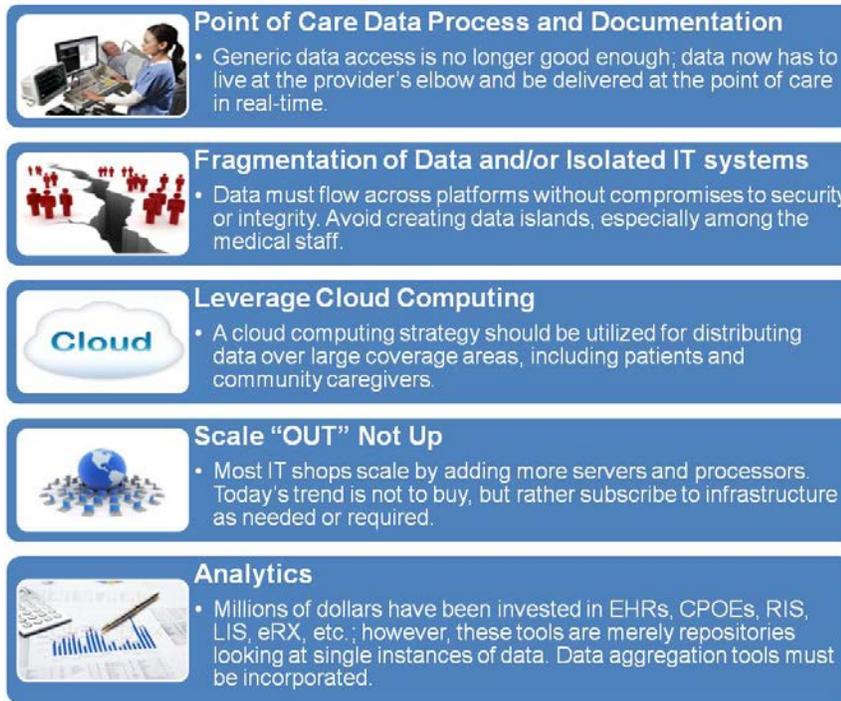| Critical Success Factors	Objectives
Standardization	One of the biggest challenges facing IT alignment is developing system standardization. Hospitals do not always own physician-friendly systems, and there is a lack of knowledge on implementing processes for ambulatory practices. Finding common ground while meeting system wide objectives without compromising physician productivity is critical.
Transformation Planning & Strategies	Acquiring a practice with entrenched technology requires a thorough review of IT systems dependency. This audit will determine the best method for converting end-users; equipment inventory, processes and vendor unwind strategies. It may also reveal potential threats that require immediate attention, avert risk, control of IP[4] and data conversion (or secure system close down) of existing systems.
Legacy System Unwind Management	HIT transformation will encounter some or all of the following: • Data conversions • System shut-down services • Negotiate Termination Clauses • Re-mapping (or new mapping) of integration • Re-creation of policies and procedures • EDI Services • Staff re-training programs • Host/support legacy systems during unwind • Implementation and training • On-boarding support

Critical Success Factors	Objectives
Performance Monitoring and Analytics	Many times the impetus for alignment stems from the need to improve overall performance. Measuring performance will be predicated on data management services and analytics.
Clinical IT Integration	The interoperability of IT solutions and the movement of data, orders, and results across multiple locations of care and caregivers (including reconciliation) should become a cornerstone of alignment initiatives.
HCIT Compliance and Incentives	Quality outcomes, eRX, Meaningful Use, HIE, Stark subsidies, PQRS, ICD-10, etc.

III.   Clinical HIT Integration

Clinical data integration from disparate stakeholders across multiple locations of care is considered the most critical objective of any HCIT alignment initiative. Today, hospitals operate in multiple databases that are not fully scalable, accurate, transparent, or secure as that of a shared environment. Indicators for financial survival appear to be predicated on collaborative care coordination within a fully functioning community of electronically integrated caregivers. As the shared risk payment model between physicians and payers matures, hospitals and healthcare providers will be required to quickly and easily aggregate current and past patient health data from the patient's entire continuum of care. Critical areas of clinical integration are outlined below (See Figure 6).

Figure 6: Critical Areas of Clinical Integration

Point of Care Data Process and Documentation
- Generic data access is no longer good enough; data now has to live at the provider's elbow and be delivered at the point of care in real-time.

Fragmentation of Data and/or Isolated IT systems
- Data must flow across platforms without compromises to security or integrity. Avoid creating data islands, especially among the medical staff.

Leverage Cloud Computing
- A cloud computing strategy should be utilized for distributing data over large coverage areas, including patients and community caregivers.

Scale "OUT" Not Up
- Most IT shops scale by adding more servers and processors. Today's trend is not to buy, but rather subscribe to infrastructure as needed or required.

Analytics
- Millions of dollars have been invested in EHRs, CPOEs, RIS, LIS, eRX, etc.; however, these tools are merely repositories looking at single instances of data. Data aggregation tools must be incorporated.

Many executives are disappointed to learn that major investments into EHR, CPOE, or single-vendor enterprise solutions do not allow for clinical integration or secure data sharing. This disparity is mostly because many inpatient vendors acquired disparate ambulatory vendors to fill in the gaps. On the contrary, other vendors took a more organic approach and built their solutions in a single database, making integration much smoother. In the Figure 7 below, an integration profile for top tier vendors across the country is outlined.

Major investments into EHR, CPOE, or single-vendor enterprise solutions do not allow for clinical integration or secure data sharing.

Figure 7: Profile for Top Tier Vendors

| Inpatient Vendors with Ambulatory Strategies	Profile
EPIC	Single Source Code, 100% organically built as a single platform. (My Chart, patient portal required)
McKesson	Interfaced to an acquired solution previously known as Practice Partners
Meditech	Interfaced to its sister company/product LSS. (Meditech recently acquired LSS)
CPSI	Single Source code, 100% build as a single platform
Healthland	Single Source code, 100% build as a single platform
Siemens	Single Source code, 100% build as a single platform
Allscripts	Known mostly as an ambulatory vendor. Allscripts recently acquired Eclipsys for inpatient capabilities
NextGen	Known mostly as an ambulatory vendor. NextGen recently acquired Opus for inpatient capabilities
Prognosis	Primary inpatient has many ambulatory partners

IV. Designing the Model

Generally speaking, most integration models require two to five years to implement fully. Each hospital will have a different starting point, which may be affected by the need to leverage or refine existing models. Some strategies will need to address external forces such as competitors, large multispecialty clinics, or group practices that carry significant influence. Models designed for affiliated and non-affiliated medical staff require more time and sensitivity regarding data sharing. Models that are exclusive to employed physicians

tend to center around more traditional models such as MSOs and PHOs. The more traditional models can easily evolve into more complex arrangements over time.

Figure 7: Two- to Five-Year Plan
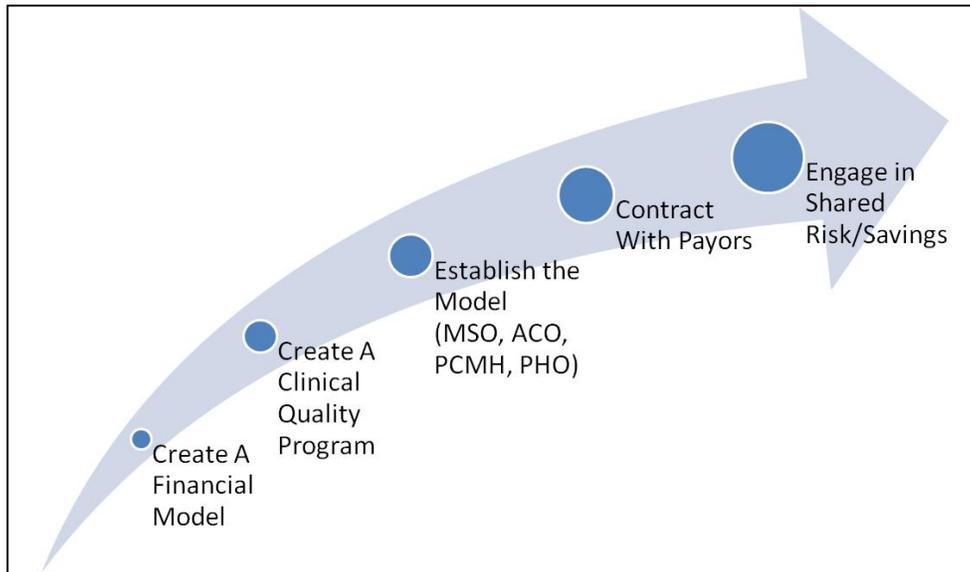
V.   The Economics

Financial viability should be the goal at the onset. Most physicians seek alignment as a potential shelter for their incomes and financial investments. The downturn in the economy has increased alignment activity. According to the American Hospital's Association report on the impact of the economic crises, hospitals saw a 56 percent increase of physicians seeking some financial support. Additionally,

- 83 percent were seeking an increase in pay-for-call coverage or other services provided to the hospital
- 69 percent were seeking employment
- 31 percent were exploring a sale of their practice to a hospital
- 23 percent were seeking some type of joint venture to purchase equipment or provide ancillary services

In an effort to avoid repeating missteps of the 1990s, hospitals are not merely providing financial support. As in other industries, it is a buyer's market and hospitals are being thoughtful and selective in their decisions, taking care to tie compensation to productivity, and ultimately outcomes. As for technology expenditures, hospitals are taking a more creative approach and commercializing their IT departments and, in some cases, acting as distributors of high-tech services for both employed and non-employed physicians.

In addition, hospitals are leveraging the Stark relaxation rules that allow hospitals to subsidize up to 85 percent of the cost of implementing an EHR system. Cost varies significantly depending on the vendor, scope of services and delivery model. The average cost for a physician to purchase and install an electronic record solution can range between $30,000 and $70,000. Following is a breakdown of these costs (see Figure 8).

Figure 8 – HCIT Components and Associated Cost

Component	Cost
Combo Software License	$10,000
Hardware	$20,000
Training	$10,000
Annual Support	$5,000
Total:	**$55,000**

Many hospitals have made significant investments in their IT infrastructure and solutions and adding a single provider to their existing system only requires a small cost. In addition to having a sunk cost, like existing servers and IT infrastructure, hospitals can leverage their buying power and drastically reduce the costs associated with HITECH spending. Hospitals frequently use a calculation that is the combined total cost of adding physicians to their platform, less 85 percent. The remaining balance is then charged back as a monthly subscription fee to the physician.

For example, using the average above, the cost to the hospital is $55,000 to add a physician to its platform for a 36-month term. After applying the maximum amount of the Stark subsidy (85 percent), the balance owed by the physician is $8,250. Generally, the amount is

paid over the term of the contract, but with arrangements similar to a traditional vendor purchase/subscription agreement. In this example, the physician will be required to pay a monthly subscription of $229. The hospital will charge more for additional training services, data conversions, interfacing, etc., but the option of paying $229 per month rather than $55,000 is clearly a more attractive option to the physician.

Hospitals are not required to fulfill the entire 85 percent, and it is strongly recommended that the physician be responsible for some portion of the investment at contract initiation. Furthermore, a mechanism for charging out-of-scope services should also be addressed. Without an initial investment made by the physician, there is a higher likelihood for abuse, in addition to "scope creep."

VI.   **Healthcare IT Mistakes to Avoid**

Below are seven fatal healthcare IT mistakes to avoid as you prepare your IT budget investments that support clinical integration.

1. "**This may not be your fault, but it is your problem" buying defective software.** Not all vendors can support clinical integrations necessary for alignment, population health management (PHM) and care coordination. Defects in software range from minor glitches to major liabilities and most defects are correctable or workarounds are possible. However, in cases where the defect creates a threat to security, patient safety, or they are a liability to the organization, you MUST address the defect immediately or discontinue its use.

2. **Buying non-compliant software or requiring the vendor to stay compliant.** Your organization's expectation is that the software will meet national standards and federal mandates. Such compliance is especially true for accountable care and population health management. What happens if your vendor fails to develop its product in accordance to these guidelines? In the case of stimulus incentives, disqualification becomes a strong possibility and penalties for not adopting can be assessed. Most vendors will agree to terms that include money-back guarantees or a guarantee to cover the cost of the penalty should their software fail to stay compliant.

3. **Failing to see the "writing on the wall."** Your system is installed, working properly, and meeting the needs of the hospital, but your vendor has commercially discontinued the product and is no longer creating enhancements. In short, you are on a sinking ship. Your ACO is underway, but the vendor has discontinued the solutions being rolled out. Not taking action or refusing to accept the obvious will only delay the unavoidable reality of having to de-install and replace your system. This event has the potential of threatening the hospital's credibility with the medical staff if the hospital knowingly encouraged the adoption of a platform that was being discontinued. Any hospital building an enterprise level adoption and utilization of third-party software should require the vendor to put their source code into an escrow account should reverse engineering becomes necessary. This measure will protect the hospital should the vendor ever cease to support the product.

4. **Over customizing or committing to one-off requests**. Customization is always a requirement, but it should be done in moderation and only when necessary. A one-off is when you provide a solution to a request from a department or individual who needs a specific IT solution to fill in gaps around the existing solution. In some cases, you have no other option, but there are trapdoors to avoid. Before granting any special requests for customization, it is best to check for a workaround or determine if a behavioral change can provide an answer to those who feel they must have their own solution.

5. **Going to market with an incomplete system.** Often, the pressure to go-live with a new system is due to provider demand, fear of missing deadlines, or from a vendor who is trying to recognize revenue by burning through budgeted hours in order to proceed to their next install. In some cases, the system is improperly tested before going live. As a result, the users or physicians often have a bad experience or worse, backsliding starts to occur. This negative result can be avoided by adopting a simple plan called Design-Build-Validate-Test (DBVT). For example, first design your order form, then build it, next validate the build with end-users, and finally test the form with end-users. This exercise will help you avoid an incomplete system design, which is particularly important for any hospital taking their IT solution to non-employed providers.

6. **Not establishing a service level agreement.** Just as you would expect from any vendor, your hospital MUST develop a clear and transparent service-level agreement that sets realistic expectations between the hospital and the medical staff.

7. **Not establishing boundaries with your vendor.** Each vendor will promote its vision of a partnership, but in reality vendors will continue to sell directly to your medical staff and may undercut your pricing. The hospital should establish boundaries pre-sale to secure a partnership in which the vendor will augment the hospital's marketing efforts, not compete against them.

Avoiding these fatal healthcare IT decisions is possible by modifying the agreement with the vendor during the contract phase. Many vendors offer a money-back guarantee if their product does not comply with stimulus regulations. Every contract should have a warranty that requires a vendor to correct defects at their expense. Under NO circumstance should you sign a contract without being entitled to future upgrades and new releases. As for the "one-offs," you should know the possible consequences and discuss them in advance.

VII. Summary

Developing the right HITECH alignment model for your hospital is paramount to a future survival. Generally, each situation will involve unique circumstances; therefore, multiple models should be evaluated to determine which will be most effective. Coker Group's approach to developing and evaluating economic HITECH alignment models begins with an initial planning phase, in which we provide the hospital and targeted physicians with the information necessary to determine if a partnership model is in the program's best interest. We bring critical objectivity to the process and know what works and what does not. Coker can provide valuable implementation support to help move the process along and ensure its success. Specifically, we can help establish the required budget, resources, and compliance guidelines for becoming clinically integrated.

For sample contract language on how to protect your hospital from fatal IT decisions and a no-cost consultation to determine how Coker may assist your hospital achieve HITECH clinical integration, please contact Jeffery Daigrepont by phone at (770) 597-0590 or via email at jdaigrepont@cokergroup.com.

References

[1] https://www.ematchphysicians.com/resources/industry-news/
[2] https://www.ematchphysicians.com/resources/industry-news/
[3] Intellectual property (IP) is a legal concept which refers to creations of the mind for which exclusive rights are recognized. Under intellectual property law, owners are granted certain exclusive rights to a variety of intangible assets, such as EHR content, template design, literary, and artistic works; discoveries and inventions; and words, phrases, symbols, and designs that may get added to the EHR.
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