Managing the Physics of the Economics of Integrated Health Care

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In this article...

Understand how the integration movement will drive the need for new operating principles, and learn how they affect the economics of integrated health systems.

Unless there is a massive reversal of policy, macro-economics and public sentiment, health reform in the U.S. moves forward. While there remains debate regarding how the realities of a reforming market play out, one irrefutable dynamic is that accelerating provider-side consolidation—specifically, the integration of not-for-profit, community health systems with physicians—will continue.

Big-picture focus

In the 1990s and over the past 10 years, much of the impetus for provider-side consolidation derived from hospital strategy—especially community hospitals needing to control primary care distribution systems.

The format was quite straightforward. The operating economics of the independent practice of primary care were deteriorating while, at the same time, the strategic value of a well-positioned primary care network was rising for community-based health systems. The result was significant investments by community hospitals (health systems) in the development and ownership of primary care networks.

Primary care was considered the “loss leader” as hospitals relied on a handful of other clinical specialties to drive profitability; e.g., cardiovascular, orthopedics, oncology, a range of procedural specialties and a few other, largely inpatient, clinical services specialties. During this period, independent physicians in single-specialty or multispecialty groups competed with affiliated hospitals for preferred-payer contracts, well-insured patients and profitable ancillary services.

Toward the latter half of the 2010 decade the economics of the independent specialty practices came under attack, most notably through significant reductions in once-profitable, ancillary diagnostic and procedural services.

Physicians have, for several decades, used multiple strategies to access and transfer hospital revenues to themselves, including use of medical directorships, on-call pay, recruitment support, co-management agreements and salary guarantees. Most of these have run their course and are no longer sufficient to enable physicians to support their incomes at desired levels.

A recent study by the American Medical Association indicated that many private practicing physicians depend on ancillary incomes for an average of 30 percent of their personal incomes. The result: consolidation and integration of physicians in clinical specialties of particular strategic value to community health systems.

Examinations of the U.S. market of cardiologists provide overwhelming evidence of consolidation and integration of independent cardiologists with community health systems (as employees). Some have estimated a reduction of cardiologists in private practice by as much as 75 percent by the end of the first decade of the current millennium.

Surveys of cardiologists who have pursued this route report stabilizations of incomes and reduced recruiting challenges. Cardiotoracic surgeons, other surgical specialties and more hospital-based specialists have followed suit.

This market activity, coupled with reasoned speculation on the likely effects of health reform, points to more and accelerating provider-side consolidation. Hospitals and health systems are realizing the critical role of physicians in any real ability to create enhanced value (improve quality and reduce costs), improve operational efficiency and address waste in health care.

Physician practice activity accounts directly for 85 percent of health care expense. As such, physician engagement, alignment and leadership are essential to the progress desired by hospitals and health systems to be high-value...
This figure highlights the importance of clinical service line balance for the Integrated Health System. This figure shows a three-year history of operating margin performance for a larger system with a 15-year operating history. Note the “balance” of the apparent, aggregate operating margin relationships.
Identify the right operating metrics when making strategic and operational judgments.

Encourage rapid-cycle change management.

Develop, deploy and support accountable physician leadership.

Before examining integrated health system economics, finance and related decision making, a few high-level observations of well-functioning, integrated health system models are needed:

Shift for health system enterprise design, capital allocation methods, and clinical and operating models. Everything changes. Integrated health systems are more than hospitals that employ physicians. As leaders shepherd their organizations to varying levels of integration, they should:

- Understand how the model differs from the past.
- Know where the strategic and economic leverage and value is in the model.

Cataclysmic economic shifts ahead

With the consolidation of physicians with hospitals comes the formation of larger, more complex integrated health system operating models. The creation and expansion of such fully integrated community health systems (i.e., health system where most, if not all, physicians are employed) represents a seismic shift for health system enterprise design, capital allocation methods, and clinical and operating models.

Figure 2

Physician Specialty Mix, % Total FTE Physicians (FTE=382; n=452)

This figure is one example of physician “balance” within an integrated health system. There is no perfect balance for all systems. The point is the need to recognize that as IHSs become “closed economies,” the need to balance proportionality of the internal provider roster becomes an essential principle of management.

- Anes/Pain Management (22)
- Casual Phy Employees
- Emergency Med (31)
- Medical Specialties (44)
- Pediatrics (20)
- Surgical Specialties (46)
- Cardiopulmonary (25)
- Diagnostic Serv. (26)
- Gastroenterology/Oncology (21)
- Neuromusculoskeletal/Trauma (55)
- Primary Care (131)
1. Large, mature, high-performance integrated health systems are largely an outpatient business. Experience with the model demonstrates that in excess of 55 percent of all operating revenues are earned in the ambulatory care settings.

2. By definition, affiliated physicians are not competitive; most, if not all, dedicate their professional time and potential to the integrated enterprise. Consequently, there is a greater potential for strategic resource and capital asset efficiency and leverage.

3. The integrated enterprise becomes a portfolio of clinical programs (business lines), each of which is exposed to: reimbursement changes, clinical innovations, capital consumption demands, and human resource supply and demand challenges. Leaders of an integrated health system must have a clear understanding of what clinical integration means and how to operate consistently.

4. Physicians are integrated as co-leaders and co-managers of the integrated models participating at four levels within the integrated health system:
   - Governance—typically up to 49 percent of board seats are held by integrated physicians.
   - As members of the senior leadership team a growing percentage of system CEOs are physicians.
   - Physicians lead the physician services enterprise within the system—often organized as physician services divisions or as a unified multispecialty group practice. These multispecialty groups and their physician leaders understand and continue to emphasize the importance of productivity and balancing revenue needs under changing reimbursement methodologies.
   - As co-managers of major clinical service lines they work across service sites and strategic geographies.

**Principles of management**

It is overly simplistic to refer to the community-based, integrated health care system as a “formula business.” But leaders of successful systems seem to agree that there is a framework of operating principles that guide decision making for most market cycles and strategic, environmental conditions.

When community health systems achieve integration to a high level (i.e., most, if not all, providers as employees) a new organizational “potential” is created. It is a new potential for tangible capital asset and human capital asset deployment. The higher-performing, integrated, community health systems optimize:

- Operating model leverage
- Capital asset efficiency and leverage
- Revenue velocity and productivity
- Efficiency of the health services unit production
- The “balance” and sizing of the clinical services portfolio
- Geographic asset deployment
- Clinical and financial integration across the physician group and with hospitals and other operating units

Consequently, nine management principles follow emphasizing the opportunity for integrated health system leaders to recognize the full potential of the model and execute a plan for optimal performance:

- System portfolios of individual and relatively interdependent clinical service lines exist, each of which is variously exposed to: clinical innovations, payer reimbursement changes, capital investment rates, staff supply and demand market dynamics and clinical innovations. Each clinical service line is sized with regard to internal patient referral and access behaviors (service demand) of the model and the need to meet required internal access. Each service line affects performance of the integrated model variously. The access and financial performance of the portfolio is dependent upon active management (see figure 1 for an example). Clinical services do not overreach and are carefully right-sized to internal needs first, then to market growth opportunities. Services needing sizable financial subsidies (trauma, pediatrics, behavioral health) are carefully evaluated to resist “mission creep.” (i.e., over-investment).

- The provider roster is sized to the service line portfolio plan. Too few or too many in any specialty and access and financial performance are negatively affected. Numbers of providers within specialties are affected by clinical models, evidence-based practice standards and strategic scenarios (e.g., strategic growth plans) (See figure 2).
Providers (physicians especially) within the system serve as the “economic flywheel” of the organization. They regulate patient flow through the system they affect, interdepartmental referral rates, fixed asset turnover and operating resource consumption rates. Likewise, there is a relatively predictable relationship between a physician, within any specialty, and clinical service use consumption rates (the use of system diagnostic and therapeutic resources). The professional behaviors (productivity) of the physicians within the system will regulate the corresponding economics with relative predictability until a new clinical innovation, new evidence-based best practice or change in economic cycles and climates occurs. Consequently, the system’s economics will slow or speed-up based upon the behaviors of the physician who controls patient service consumption rates and related resource consumption and application rates. Many integrated health system leaders have concluded that a “blended” physician productivity rate at the 60th (or higher) percentile is required to ensure the potential of the total asset base is sufficiently applied. Successful systems remain productivity focused while using efficient high-performing systems of care to create increased quality and strong patient experiences. Leaders of these systems are keenly aware of the need to stay focused on high-productivity and efficient models of care. As a result, they often establish clear (and written) performance expectations around access, referral management, care coordination and evidence-based care.

Interviews with system leaders indicate a physician extender-to-physician ratio of 0.6 to 1.0. Planning models for a number of these systems expect the patient panel size of primary care providers to nearly triple over the near-term, due to impending shortages of primary care physicians. Consequently, it is expected that primary care physicians may manage from two to three physician extenders, all supported by an electronic health record, evidence-based best practices and expanding preventive care models. For integrated health systems, the physician extender models manifest across clinical specialties. Systems are well into deployment of team-based models of primary care using a variety of approaches to interprofessional care management and proactive chronic disease management.

One study of system financial performance demonstrated the value of the regional primary care network in affecting the financial performance of the integrated health system overall. These studies show, in part, the importance of managing the “front door” of the organization; i.e., key access points such as local and regional primary care points of access. High-performing systems will also control and direct system access at multiple geographic and specialty services access points. These systems are opening up for direct access to clinical specialties once dependent upon primary care as the first point of access; e.g., orthopedics (and orthopedic urgent care), spine care, women’s services and urgent care.

Integrated system leaders fully appreciate the need to retain referrals within the system, especially for high-value clinical services. While seemingly obvious, a number of early-stage systems suffer from the loss of referrals generated to providers outside the system by providers within the system. The reasons are various, and somewhat predictable, such as historic professional referral relationships of independent physicians integrated with a health system. The problem of referral “leakage” or lack of “keepage” as one system leader refers to the challenge is a direct threat to the system’s financial and asset base performance. Keepage will become even more critical as population and value-based purchasing models emerge. Integrated health systems see value in their delivery models, believe in their ability to create value and a strong patient experience, and understand that the revenue opportunities of the future require in-network high performance for all attributed patients.

Most system leaders report using productivity-driven provider (physician) compensation models. Historic definitions often characterize “professional productivity” as the generation of work relative value units (WRVUs) by providers (primary care and specialty providers included). Under these models, physician compensation has been a product of the number of WRVUs produced multiplied by an internal value of WRVUs, that has typically varied by clinical specialty according to market conditions. The theory here is that under a fee-for-service reimbursement environment, a busy physician produces predictable units of production and “downstream” services and revenues for the system. Future models of provider compensation for the system are likely to favor more salary-based designs, according to leader interviews. Such models may emerge more quickly for primary care providers with incentive bonus payments based upon health status and resource consumption rates for patient panels served by the primary care teams.
A recent study of 28 integrated health systems demonstrated that the more fully integrated systems show improved capital efficiency over similar, but less integrated, community health system models. The importance of this finding is that, as U.S. health reform and related, industry-wide macroeconomic pressures affect U.S. community health systems, capital efficiency (i.e., the efficiency of the fixed asset base) becomes a more critical requirement of effective management. This importance is heightened as credit markets become more discerning regarding lending to community health systems; i.e., the determination by the capital access markets that the business model is important and the more integrated models are more likely to succeed in a reforming health care marketplace. The less-integrated models, especially those where independent physicians compete with each other and affiliated hospitals, have little chance to optimize a fixed asset base exposed to compressed depreciation curves, accelerating capital asset obsolescence and rapid cycle clinical and technology innovations.

As cited previously, in excess of 55 percent of net operating revenues for integrated health systems are produced in the ambulatory settings (including providers’ professional fees). Some system leaders expect this ratio to exceed 60 percent soon. Many systems have not had the time, as yet, to evolve these fixed-asset foundations to serve “smart,” strategic ambulatory strategies. Surveys of U.S. health system chief financial officers show an expectation of over 18 percent of future capital investments to be allocated to ambulatory strategies, including large, ambulatory “destination” centers.

Many more traditionally configured community health systems (i.e., independent community hospitals served by independent, affiliated physicians) are challenged by the prospects of becoming “accountable care organizations” (ACOs). The more mature, high-functioning models are more likely to succeed in a reforming health care marketplace. The less-integrated models, especially those where independent physicians compete with each other and affiliated hospitals, have little chance to optimize a fixed asset base exposed to compressed depreciation curves, accelerating capital asset obsolescence and rapid cycle clinical and technology innovations.

In today’s complex society, health care challenges are no longer adequately addressed by the traditional paternalistic physician role. Health care must be physician-led, but patient-centered. In this paradigm shift, effective leadership must be collaborative rather than authoritarian, proactive rather than reactive.

MD 2.0: Physician Leadership for the Information Age

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integrated systems believe they are sufficiently prepared by their design; prepared especially to pursue financial risk from payers. A number of systems believe their ability to accept financial risk from payers to be a differentiating, strategic advantage over the less-integrated models, especially as payer strategies advance toward the transfer of financial risk to provider organizations as their strategic imperative. A principal advantage of the integrated model here, according to leaders, is the integrated design disconnects system reimbursement methods from internal provider compensation designs. Varying reimbursement strategies by payers are, simply, differing methods of payment (revenue flows) to the system. Internal provider compensation models are not subject to the economic effects of each payer agreement executed by the system. In other words, physician incomes are not directly exposed to the vagaries of a changing reimbursement scheme marketplace or health system contracting strategies. Success, however, requires physicians to feel an accountability, along with system leadership and management, for not only clinical outcomes, but also operational efficiency, financial performance and a market-distinguishing patient experience. In the end, physicians still must help ensure that the system has the revenue and operating margin needed to fund their compensation.

**Summary**

The physics metaphor, as applied to the economics (and financial performance) of the integrated health system, seems appropriate when considered together with the nine principles of management framework provided.

The nature of the integrated design enhances leaders’ management potential as they consider organizational operations and strategy in the markets ahead. One question begged by this argument for the integrated design is the durability, efficiency and ultimate long-term survivability of the more “traditional” community health care delivery models, which, by design, are fragmented, internally competitive and less capital efficient. They also cannot exploit the leverage of teams, optimal access management or the pursuit of revenues made available in many forms.

For those who wish to move from the traditional to the more integrated community health system designs (especially those who have not yet started the journey), the path requires:

- Sufficient balance sheet capacity to fund the integration process—especially as the model requires physician practice acquisitions and electronic health record implementations
- A well-prepared board
- A functional, durable and sustainable physician services enterprise design
- A redesigned organizational and governance structure
- Favorable internal financial incentives alignment design
- Effective accountable physician leadership
- Awareness that the system is not solely a funding strategy for acquired physicians, rather a fully committed clinical and business model, one in which patient-centered integrated care is the core service (and not acute care hospital-based services)
- A willingness to create and exploit the implied and inherent potential of an integrated design and unified brand

Last, it’s important to remember that an integrated health system is a tool that creates a “new potential” (a physics metaphor reference, one last time). The design doesn’t operate itself. Application of the management principles presented here are necessary as a complete recipe. Leaders of health systems moving toward integration are cautioned to apply the recipe in full.

This article ends with two questions. First, if not an integrated model of health care, what’s the alternative? Since it seems clear that many of the existing community-based models are excessively fragmented and inefficient, especially in a reforming U.S. health care marketplace, is there a new model that is superior to the integrated models and, if so, what is it and what are its functional principles?

The second question: Is there more than one functional form of integration? This article argues for the most integrated form. Others would argue that clinical integration is sufficient, and full integration isn’t required. The stability, durability and adaptability of the fully integrated models have, arguably, been tested. The lesser integrated models remain to be proven in an unstable health care marketplace seeking higher levels of economic efficiency.

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15. The reference to “clinical integration” pertains to “networks” composed of independent physicians and hospitals linked together by legal agreement for purposes of accepting and managing financial risk made available through third party payer agreements. Under these designs, participating physicians are not employed by network hospitals and health systems.