Tracking The Changing Provider Landscape: Implications For Health Policy And Practice

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Tracking The Changing Provider Landscape: Implications For Health Policy And Practice

The shifting landscape brings challenges to nationwide efforts toward accountability and improved quality of care.

by Gloria J. Bazzoli, Stephen M. Shortell, Federico Ciliberto, Peter D. Kralovec, and Nicole L. Dubbs

ABSTRACT: Throughout the 1990s health care providers were interested in developing organized delivery systems. However, industry observers have increasingly questioned the sense of these efforts. Using an established taxonomy of health networks and systems, we examined whether there was a nationwide trend away from the vertical and horizontal arrangements that serve as the backbone to organized delivery systems. Studying 1994–1998, we found that both health networks and systems became less centralized in their hospital services, physician arrangements, and insurance product development. We did not find a general pathway to disintegration but instead found considerable experimentation in organizational form.

The merger and affiliation mania in the hospital industry during the 1990s captured the attention of health executives, policymakers, and purchasers alike. Based on early evidence, some heralded the resulting changes as the beginning of a new era in health care delivery—one focused around organized systems of health care delivery and financing. Others were skeptical, viewing these efforts as moves to generate increased market power, as new approaches to achieve old aims (namely, to align more physicians to fill empty hospital beds), or as mimetic responses that copied the actions of others without commitment to organizational change. Initially, consultants and the trade press promoted these efforts, and some suggested that the very survival of health care providers in the new world of managed care was contingent on developing organized delivery systems. Now these sources highlight examples of demerger and disaffiliation that are being cited as the new trend.

What exactly is happening across the national landscape? Are we observing a general, nationwide trend away from the vertical and horizontal arrangements that were to provide the backbone for organized delivery systems?

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How did the organized delivery system movement play out across the United States through the 1990s? We address these questions, assessing changes in the structure of hospital-led health networks and systems during 1994–1998. We first describe our data on hospital-led organizations. Then, we describe our approach for longitudinal study of organizational trends. Finally, we present our findings and discuss their implications for health policy and practice.

**Hospital-Led Systems**

Since 1994 the American Hospital Association (AHA) has monitored two types of emerging hospital-led organized delivery systems: health networks and health systems. The AHA uses multiple sources of information with the intent of identifying the universe of these entities in operation each year. Health networks are strategic alliances or contractual affiliations of hospitals and other health organizations (for example, nursing homes and home health agencies) that provide an array of services and products. Health systems differ in that they have unified asset ownership of affiliated hospitals and other organizational units. The key distinction between these two forms of organization is the presence of diversified ownership (health networks) versus unified ownership (health systems).

As hospitals developed into networks and systems, changes occurred in (1) the type and scope of services offered so that a broad continuum of primary, preventive, acute, and chronic health services could be provided (differentiation); (2) the extent to which specific services were delivered by one or a few network/system affiliates versus being dispersed throughout the system (degree of centralization); and (3) the use of network/system affiliates to deliver specific health services versus arranging service delivery through vendors outside the network/system (mechanisms to integrate activity).

For our original research, the three concepts of differentiation, centralization, and integration were applied to the product/service domains of hospital services, physician arrangements, and provider-based insurance products. For example, physician-hospital relationships were measured in terms of the number of arrangements present (differentiation), whether these arrangements were located at the network/system level or at individual hospitals (degree of centralization), and whether physicians were aligned through contractual mechanisms, such as independent practice associations (IPAs) or physician-hospital organizations (PHOs), or through employment arrangements (mechanisms for integration).

**Taxonomy categories.** The organizational categories derived for the taxonomy were largely influenced by centralization and differentiation. Centralized health networks and systems are delivery organizations in which the network or system centrally organizes hospital services, physician arrangements, and insurance product development. These types of organizations are most similar to the integrated delivery systems (IDSs) commonly referenced in the hospital trade and consultant literature of the 1990s. Centralized networks and systems tend to be located in urban areas with hospitals in close proximity to each other. Examples in 1997–98 included Crozer-Keystone Health System in Springfield, Pennsylvania, and Legacy Health System in Portland, Oregon.

Centralized physician/insurance health systems are present for health systems only. Comparable to centralized health systems, these organizations have highly centralized physician arrangements and insurance products. However, hospital services are decentralized, with individual hospitals having discretion over the array of services they offer. Affiliated hospitals tend to be very close geographically. Examples in 1997–98 included BJC Health System in St. Louis and Henry Ford Health System in Detroit.

Moderately centralized health networks and systems have centralized activity in selected hospital services, physician arrangements, and insurance products but also simultaneously decentralized activity. For example, these networks and systems may have hospital-
based PHOs but also an overarching, centralized super-PHO or super–management services organization (MSO). These organizations also may deliver expensive tertiary services, such as cardiac surgery, in a few central hospitals but allow affiliated hospitals to select their mix of traditional acute hospital services based on local need. These organizations tend to have more affiliated hospitals that are more geographically dispersed than the centralized forms. Examples in 1997–98 included Advocate Health System in Oak Brook, Illinois, and Mayo Foundation in Rochester, Minnesota.

Decentralized health networks and systems are characterized by a high degree of decentralization of hospital services, physician arrangements, and insurance product development. They typically have highly developed local delivery systems that are centered around individual hospitals. The network or system may only serve a facilitating role in terms of information systems, purchasing, or other administrative functions. Hospitals in decentralized networks/systems tend to offer a wide array of services and to be spread over a broad geographic area. Examples in 1997–98 included Catholic Health Initiatives in Denver and Intermountain Health Care in Salt Lake City.

Finally, independent hospital networks and systems have limited differentiation and centralization of physician arrangements and insurance products. They are largely horizontal aggregations of hospitals in which each hospital maintains much autonomy. These networks/systems are similar to traditional multihospital systems in that they focus strictly on hospital services, not development of linkages to physicians and insurance. Examples in 1997–98 included Bassett Healthcare in Cooperstown, New York, and Great Plains Health Alliance in Phillipsburg, Kansas.

**Study Approach**

The principal sources of data for our analysis were the 1994, 1996, and 1998 AHA Annual Surveys of Hospitals. For our longitudinal analysis, we examined industrywide snapshots of health networks and systems for each of these years to assess patterns of structural change over the period. We determined taxonomy classifications for operational health networks and systems each year using the measures and the prediction models from our original analysis. We also assessed changes in the degree of centralization for each of the three product/service lines of hospital services, physician arrangements, and provider-based insurance products for health networks and systems in the three years.

**General industry structure: 1994–1998.** The number of health networks declined from 274 in 1994 to 247 in 1998 (Exhibit 1). Conversely, the number of health systems rose to 365. Comparable to earlier work, we included local and regional subsystems of major national systems in our total system count. Hospitals in subsystems are all owned by the

### EXHIBIT 1

*Health Networks And Systems Identified In American Hospital Association Databases, Selected Years 1994–1998*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health networks</td>
<td>274</td>
<td>261</td>
<td>247</td>
</tr>
<tr>
<td>Health systems</td>
<td>295</td>
<td>332</td>
<td>365</td>
</tr>
<tr>
<td>Affiliated hospitals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health network hospitals</td>
<td>2,256</td>
<td>2,569</td>
<td>2,512</td>
</tr>
<tr>
<td>Health system hospitals</td>
<td>2,836</td>
<td>3,023</td>
<td>3,221</td>
</tr>
</tbody>
</table>

**SOURCE:** American Hospital Association data files, including 1994–1998 annual surveys and health network profiles.

Consistent with G.J. Bazoli et al., “A Taxonomy of Health Networks and Systems,” Health Services Research (February 1999): 1683–1717, the count of health systems includes subsystems in which a subset of hospitals from a larger national system, such as Catholic Health Initiatives or Columbia/HCA, are organized in local or regional divisions to provide health services.

Represents a total, unduplicated count of system hospitals.
same parent organization (for example, Catholic Health Initiatives or Columbia/HCA) but are organized so that health services can be coordinated locally. The number of both primary systems and subsystems grew between 1994 and 1998 (from 278 to 299 and from 17 to 66, respectively, data not shown).

The number of affiliated hospitals in health networks rose between 1994 and 1996, despite the decline in the number of operational networks, but it fell slightly by 1998. The total number of system-affiliated hospitals increased steadily over 1994–1998.

■ **Taxonomy classifications of health networks.** In 1994 the moderately centralized health network category dominated the others, representing 52 percent of networks operational at that point in time (Exhibit 2). In 1996 this category grew in dominance to 66 percent of operational networks, while the proportion of centralized health networks dropped to only 4 percent. By 1998 the moderately centralized category declined slightly and the independent health network category grew in proportion. We conducted statistical tests to assess whether these changes reflected significant change in distribution or simply random statistical variation. We found that the distributions for 1994 and 1996 were indeed significantly different from each other and that the distributions for 1996 and 1998 were marginally significantly different ($p = .103$). As such, the findings suggest that there has been significant change in the organizational structure of health networks across the study years, with a movement away from the centralized form to moderate centralization and independent hospital networks.

We also examined all centralized health networks that were in operation during 1994 or 1996 but were no longer in existence by 1998 to determine what happened to them. These nineteen networks did not dissolve but instead became health systems or subsystems.

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**EXHIBIT 2**

**Health Network Taxonomy Classifications, Selected Years 1994–1998**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number</th>
<th>Centralized</th>
<th>Moderately Centralized</th>
<th>Decentralized</th>
<th>Independent Hospital Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>271</td>
<td>18%</td>
<td>52%</td>
<td>3%</td>
<td>27%</td>
</tr>
<tr>
<td>1996</td>
<td>257</td>
<td>4%</td>
<td>26%</td>
<td>4%</td>
<td>34%</td>
</tr>
<tr>
<td>1998</td>
<td>241</td>
<td>1%</td>
<td>61%</td>
<td>4%</td>
<td>34%</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ analysis of American Hospital Association data, including 1994–1998 annual surveys and health network profiles.
This suggests that the centralized health network form for these entities may have been a stepping stone to the formation of a system or subsystem under a single parent organization. While this might be true for some organizations, the data reported in Exhibit 2 do not suggest that there is a general pathway of transition from looser network forms ultimately to more tightly organized systems. If such a pathway were present, we would have observed more stability in the taxonomy distributions over time as successive waves of networks entered the centralized network category in preparation for transition to a health system. Instead, it appears that the transition to a system made sense for some health networks but not for others.

**Taxonomy classifications of health systems.** Comparable to the health networks, we also see change in health system taxonomy classifications over time (Exhibit 3). In 1994, 16 percent of systems were centralized health systems, and an additional 22 percent were centralized physician/insurance systems. Moderately centralized systems represented a quarter of operational systems, and a similar proportion were independent hospital systems. The remaining 13 percent were decentralized. In 1996 the moderately centralized category grew to 37 percent, while all of the other categories shrank. Statistical tests indicated that the 1994 and 1996 distributions were significantly different ($p = .021$). In 1998 the moderately centralized category represented 42 percent of operational health systems, and declines occurred in the centralized and decentralized health system categories. However, the 1996 and 1998 system distributions were not significantly different. The overall growth in the moderately centralized category and the relative declines in the centralized categories in 1994–1998 may reflect reactions of health systems to the diseconomies that resulted from overcentralization.7

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**EXHIBIT 3**

Health System Taxonomy Classifications, Selected Years 1994–1998

<table>
<thead>
<tr>
<th>Year</th>
<th>Centralized health system</th>
<th>Centralized physician/insurance system</th>
<th>Moderately centralized health system</th>
<th>Decentralized health system</th>
<th>Independent hospital system</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>16%</td>
<td>22%</td>
<td>25%</td>
<td>13%</td>
<td>24%</td>
</tr>
<tr>
<td>1996</td>
<td>13%</td>
<td>18%</td>
<td>10%</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>1998</td>
<td>8%</td>
<td>20%</td>
<td>7%</td>
<td>23%</td>
<td>24%</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ analysis of American Hospital Association data, including 1994–1998 annual surveys and health network profiles.
Trends in service and product centralization. As a final analysis, we examined changes in the degree of centralization among health networks and health systems between 1994 and 1998. We did so because centralization is the most important feature distinguishing organizational categories of the network/system taxonomy. Further, changes in centralization over time may have been more pronounced in one product/service dimension than in another.

Exhibit 4 reports average centralization scores for the product and service variables that were relevant to deriving health network and system taxonomy classifications. The six centralization measures relate to (1) the degree to which long-term and chronic care services are centralized in the network or system; (2) the degree to which high-tech services are centralized in the network or system; (3) the presence of network- or system-level contractual relationships with physicians through PHOs, IPAs, and other similar organizations; (4) the presence of network- or system-owned physician practices; (5) the presence of a network- or system-owned health maintenance organization (HMO); and (6) the presence of a network- or system-owned preferred provider organization (PPO). In all instances, higher values on a centralization measure indicate higher levels of network- or system-level involvement in these activities. We again conducted statistical tests to assess whether differences in centralization scores between 1994 and 1998 for each measure more likely reflected true differences rather than random statistical variation.

For health networks, the degree of centralization declined significantly for all six centralization measures between 1994 and 1998. Centralization declined most for the hospital service measures and for network involvement in owned physician practices (declines of 75–80 percent). Network-based HMO and PPO products also declined by around 60 percent, whereas network involvement in contractual physician relations declined by only 35 percent.

Health systems also experienced declines on most centralization measures between 1994 and 1998.

### Exhibit 4
Levels Of Centralization In Networks And Health Systems, 1994 Versus 1998

<table>
<thead>
<tr>
<th></th>
<th>Health networks</th>
<th></th>
<th>Health systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital service centralization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term/chronic care</td>
<td>.045</td>
<td>.012</td>
<td>&lt;.0001b</td>
<td>.075</td>
</tr>
<tr>
<td>High-tech services</td>
<td>.050</td>
<td>.012</td>
<td>&lt;.0001b</td>
<td>.075</td>
</tr>
<tr>
<td>Physician arrangement centralization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent with contractual physician arrangements</td>
<td>41.9%</td>
<td>14.6%</td>
<td>&lt;.0001b</td>
<td>63.8%</td>
</tr>
<tr>
<td>Percent with owned physician arrangements</td>
<td>18.1%</td>
<td>3.7%</td>
<td>&lt;.0001b</td>
<td>30.3</td>
</tr>
<tr>
<td>Provider-based insurance centralization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent with provider-based HMO product</td>
<td>14.4%</td>
<td>5.6%</td>
<td>&lt;.0001b</td>
<td>19.6%</td>
</tr>
<tr>
<td>Percent with provider-based PPO product</td>
<td>17.4%</td>
<td>6.9%</td>
<td>&lt;.0001b</td>
<td>27.5</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ analysis of American Hospital Association (AHA) data, including 1994–1998 annual surveys and health network profiles.

**NOTES:** HMO is health maintenance organization. PPO is preferred provider organization.

- Factor scores for the following hospital services identified in the AHA annual survey: Long-term/chronic care: general acute care beds, geriatric services, long-term care, psychiatric services, women’s health services, and other community services.
- High-technology services: cardiology services, diagnostic services, emergency care, surgery, and other tertiary services.
- Statistically significant based on individual $p \leq .107$, which results in joint significant of $\alpha = .10$ for six centralization measures.
- Not statistically significant.
1994 and 1998. Centralization of the two hospital service measures declined significantly (23–32 percent). System involvement in contractual physician arrangements, owned physician practices, and provider-based PPO products each declined by approximately 27 percent. However, system involvement in HMO products did not change significantly. Generally, while health networks and systems both experienced significant declines in centralization measures, the magnitude of these declines was lower for systems than for networks.

Insights On Industrywide Change

The 1990s represented a period of great turbulence for the health industry. Overall, we found that health networks were particularly affected by this unsettled environment more so than health systems. These findings provide a national perspective on some of the market-level phenomena described in recent research of the Community Tracking Study conducted by the Center for Studying Health System Change (HSC). HSC is conducting longitudinal case studies of twelve markets, including examination of changes in provider organizations there. One recent observation was that vertical “disintegration” was occurring as organizations sold or discontinued their insurance divisions. We observed this phenomenon in our national empirical data for health networks. Changes for health systems were more complex. They tended to reduce their involvement in provider-based PPO products through 1998 but not in provider-based HMO products. Further, HSC reported that some hospital-led organizations were dropping their physician organizational arrangements. Our results concur with this assessment but again, more so for networks than for systems. Finally, HSC suggested that providers were increasingly focusing on horizontal consolidation as they scaled back vertical physician and insurance activity. This observation is consistent with our finding about the growing proportion of networks categorized as independent hospital networks. However, the counterpart of this category for health systems— independent hospital systems—did not grow over the study period, and about 75 percent of systems continued involvement in both horizontal and vertical arrangements.

Our results are also consistent with recent in-depth longitudinal studies of selected health systems that are examining the changing locus of activity for certain provider functions. Specifically, recent studies suggest that systems have moved certain functions, such as continuous quality improvement, information technology, and strategic planning, from their corporate offices to regional divisions or local affiliates, reflecting a blended model that combines centralization of some activity and decentralization of others. Our findings give rise to two important questions: First, why have health networks and systems both become less centralized over time; and second, why do we see more extensive change for networks than for systems? The answer to the first question likely lies in the market-level phenomena studied by HSC. HSC described the early 1990s as a period in which providers were assembling the pieces for future development of localized delivery systems. When hopes for national health reform faded, network and system executives turned their attention locally, viewing opportunities to contract directly with employers or with HMOs through global capitation. However, these opportunities did not materialize to the extent expected. As a result, there was less need for centralized direction and control from the network or system office.

The answer to the second question most likely relates to the fundamental difference in mechanisms used by these organizations to bring organized delivery systems together. Health networks more frequently use contracts and letters of agreement between affiliates. By their nature, these mechanisms are quite flexible and relatively straightforward to develop. However, they also can be easily terminated. Ownership-based health systems have less flexibility in striking new relationships because these involve the purchase of assets and consolidation of ownership. Hence,
the flexibility of contractual networks may come at the cost of greater instability over time.

Implications For Health Policy And Practice

Our findings provide an important set of insights for health industry leaders, policymakers, and payers alike. Foremost, the anecdotes touted in the trade press about organizational break-up and demise are just that—anecdotes in which interesting and sometimes sensational events have occurred. We did not find evidence that providers’ efforts to develop organized delivery systems nationwide are on a pathway to disintegration. Rather, the period we studied can best be characterized as one in which hospital-led organizations experimented with different organizational forms.

Such experimentation can create organizational instability, which may present daunting challenges for payers and policymakers. Payers and policymakers face an array of differently structured health organizations that is further complicated by frequent organizational change. Given this state of flux, public and private payers may need to rely on short-term reimbursement contracts rather than the long-term contracts preferred by health care providers.

In addition, our study findings have implications for policy options related to health quality reporting. Two recent Institute of Medicine (IOM) reports, *To Err Is Human* and *Crossing the Quality Chasm*, have called attention to serious problems in the quality of care provided to Americans. As a result, deficiencies in health care quality and outcomes have joined cost containment and the need to improve access to care on the nation’s health policy agenda. Efforts to deal with health care quality must take into account the changing provider landscape as we have described. For example, the consolidation of the industry offers potential opportunities in the efficiency of quality and outcome reporting if reporting requirements are designed so that networks or systems can collect and report data for their affiliated hospitals, thereby reducing the burden on individual hospitals. This also would reduce the demands on the involved state and federal agencies, because they would have fewer data-reporting units with which to interact. The extent to which this meets accountability objectives may depend on the level of centralization within the network or system. In general, centralized and moderately centralized networks and systems are more likely to be able to engage in network- or systemwide reporting than are decentralized or independent networks and systems. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has adopted a flexible approach along these lines by conducting some system- or networkwide reviews of multiorganizational delivery entities.

The taxonomy also has important implications for redesigning systems of care delivery as called for in the *Crossing the Quality Chasm* report. For example, the ability to standardize care processes, information platforms, and outcome reporting systems will likely depend on the ability of networks and systems to achieve requisite levels of centralization so as to direct resources across the network or system. At the same time, however, individual hospitals and, indeed, care teams within the hospitals must be given the autonomy and freedom to “customize” approaches and to innovate in meeting local health needs. The key challenge is one of maintaining balance so that the advantages of centralization (direction and resource deployment) and decentralization (empowerment and innovation) can be enhanced and the disadvantages of each mitigated.

Overall, the pattern of organizational change across the U.S. health care industry requires continued careful monitoring and study. An understanding of these patterns is critical for leaders of health organizations as they work to position their organizations for success in meeting new demands for clinical accountability and maintaining their financial viability. Understanding the patterns of change is also important for public policymakers and
payers as they design programs and policies that can better take into account the core features of health networks and systems.

Funding from the Robert Wood Johnson Foundation’s Investigator Awards in Health Policy Research program supported Gloria Bazzoli’s involvement in this study (Grant no. 038649). Research for this paper was undertaken while Bazzoli was research professor with the Institute for Health Services Research and Policy Studies, Northwestern University. The Health Research and Educational Trust of the American Hospital Association provided research assistance for this project.

NOTES
6. Our counts of network and system-affiliated hospitals vary from those reported in American Hospital Association, Hospital Statistics, 2000 ed. (Chicago: Health Forum, 2000), because this publication only reports these data for community hospitals. The organizational taxonomy looked beyond this subset to all U.S. hospitals because organized delivery systems may turn to specialty and long-term care hospitals to provide a broad continuum of care.
14. In this regard, it is of interest to note that one of the more advanced patient safety monitoring systems nationwide is that of the Veterans Health Administration, which is organized around twenty-one vertically integrated service networks, or VNSNs.
15. IOM, Crossing the Quality Chasm.