The American Journal of Surgery xxx (2017) 1–5

Contents lists available at ScienceDirect

The American Journal of Surgery

journal homepage: www.americanjournalofsurgery.com

The changing paradigm in surgery is system integration: How do we respond?

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ARTICLE INFO

Article history:
Received 1 September 2017
Received in revised form
24 November 2017
Accepted 28 November 2017

ABSTRACT

With expansion of health care systems across the country, close relationships need to be developed between academic medical centers and their affiliated community hospitals. This creates opportunity to integrate surgical programs across different hospitals. Herein we describe a model of surgical integration at the system level of five large hospitals. We discuss utilizing advantages that both the academic and community hospital bring to the model. A close relationship between an interdisciplinary team, which includes the academic surgical chair, a regional director liaison who was embedded in the community, individual hospital leadership, and practice plan leaders was created. Three pillars as a foundation to success were physician leadership, the use of system infrastructure and development of new processes. This resulted in development of trust, leading to successful recruitments, models of employment and expansion into novel areas of patient safety. Once created, new opportunities for programming for surgical safety across the health care were identified.

1. Introduction

In the current environment of healthcare, forces of change have altered surgical practices at all levels. It does not matter which discipline of surgery, which division of surgery, or the types of practice- ambulatory, inpatient, simple or complex- the changes are similar. Individualized care of our patients is moving towards mutual accountability, and fulltime responsibility for patients is migrating to group care, as a result of changing work habits. Even hospital-based surgical care is migrating to outpatient setting and care and enhanced recovery after surgery has led to more post operative care at home.

The reasons for this shift are multiple. For the private practitioner, the high costs of running a practice and decreased compensation for services has made many general surgical practices unsustainable, so there has been a shift from self-employed to employed surgeons.[1,2] For the academic surgeon, the decreased reimbursement along with decreased source of funding for research has forced many to be assigned higher clinical targets.

Financially, compensation models in surgery are changing rapidly. Fee-for-service practices are transforming into systems anticipating bundled payment for diseases, and health systems are consolidating to take advantage of efficiencies of a single organization. This is thought to increase value, decrease cost, and gain market share. As a result, many physician contracts are now based not on cash receipts but on 'relative value units' (RVUs), which is still nebulous to both the academic surgeon and private practitioner.[3]

The development of large health systems based around academic centers allows for transitions of community practices- surgeons in solo practice- the opportunity for practice security, and group practices can enjoy higher reimbursements with proof of higher quality care. For the academic surgeons, it provides an opportunity for a secure source of referrals and surgical populations to study.

Integration of academic and private surgeons into an integrated health care system is increasing in frequency, bringing new stresses into the lives of unprepared but dedicated physicians. Interestingly, while the integrations change in billing and practice patterns for physicians, it is still unclear if overall they are beneficial.[4] Nonetheless it is occurring, and change agents are needed to facilitate the transition of practices, practice patterns, and people smoothly.

We report how we approached this unique challenge in an urban, suburban and academic health care market at the Johns Hopkins Health System from 2011 to 2016. We have found that in order to integrate academic and private practitioners into a

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https://doi.org/10.1016/j.amjsurg.2017.11.031
0002-9610/

healthcare system, three components are essential: physician leadership, an administrative infrastructure to provide the support for the integration, and processes within the infrastructure to engage the physicians and facilitate change. This foundation allows the development of new programs for the health system. Since its implementation, we have moved to re-create the model at other institutions.

2. Methods

2.1. Physician leadershp

The conversion of surgeons who are in private practice to full employment models in a large organization is not new. In 2011, the New York Times showed that medicine as a field has been shifting away from smaller private practices to an industry dominated by larger groups of doctors and salaried jobs.[5] This was similar to the findings by Charles et al. who showed that by 2010, 68% of surgeons were employed, versus 32% self-employed. So, from our perspective, in 2011, the timing was right to bring such change to a large healthcare system.[1]

Johns Hopkins Medicine originated as the Johns Hopkins Hospital and Medical School in 1889 and 1893, respectively. In 1994, the hospital integrated with Johns Hopkins Bayview Medical Center (JHMBC), and by 2008, the clinical arm showed 1675 beds (990 in Baltimore, at the main campus and 685 at the Bayview campus), with 96.7 thousand annual hospital admissions, 1.87 million outpatient visits and emergency department visits of 263.9 thousand. In 2010, Suburban Hospital in Bethesda, Maryland (Community Hospital A; CHA) was brought into the healthcare system and in 2011 Sibley Memorial Hospital was brought in (Community Hospital B; CHB). The integration of CHA and CHB followed Howard County General Hospital in Columbia, Maryland which joined in 1998 (CHC). All three were 25 to 40 miles south of Baltimore.

By 2011, the integration of these three vibrant community hospitals brought a total of 805 new beds into the healthcare system, with 40,700 inpatient admissions, 270,000 outpatient visits, and a 146,000 emergency room visits. In addition, the outpatient clinical arm of Johns Hopkins included the Johns Hopkins Community Physicians (JHCP) which brought system over 30 free-standing offices, over 300 providers and 230,000 patients.

While the structure of Johns Hopkins Hospital and JHBMC was the classic academic model of 20 departments, 13 of which were surgical and over 90% employed physicians, the community hospital structure was exactly the opposite. At CHA, CHB and CHC Hospitals, there were very few employed surgeons, and, as mandated by their by-laws, the chairs of surgery were elected for terms of two to five years. The chairs were all members of the community, and not all were interested in absorption into a new health care system. Integrating the surgical programs in these hospitals was seen to be a challenge, and a facilitator was needed.

In 2010, the Chair of Surgery at Johns Hopkins (JAF) agreed to lead the campaign to integrate the community surgical programs. All stakeholders agreed that a clinically active and respected academic leader would be an effective facilitator if she or he embedded himself/herself into the community hospitals. It set the example that although the academic center in a different city led the transformation, the physicians were truly interested in the community hospitals and its surgeons. The JHCP organization was to provide the administrative support for the surgical practices.

In January 2011, with full support of the administration of Johns Hopkins Hospital, the Dean of Johns Hopkins School of Medicine, the President of JHCP, and the presidents of the three community hospitals, the "Regional Director of Surgery" (RDS) for the newly formed National Capital Region was recruited (MEZ). Together they created a mission statement which was *"to lead the integration of general surgery care in the community hospitals into the Johns Hopkins Health System."* Immediately, they developed a plan to (1) assess the needs for each community clinical entity, and (2) create surgical initiatives in line with each of the hospital's needs. The goal for surgical patients was to identify complex ones early, and triage them to the right surgeon at the most appropriate hospital within the system.

The first step for the RDS was to engage the community surgeons and the hospital leadership. It was important to meet the surgeons individually- both the ones in private practice and the academic full time employees *in their own offices* in order to solidify the impression that the health care system respected the value they brought to the organization. The first conversations with focused on simple facts, for example to see what how their practices functioned, what their perceptions were of the integration and what were their personal needs. Three types of private practices were identified: large multispecialty practices, smaller group practices, and individual surgeons who were in offices by themselves. The RDS also engaged a number of the referring primary care physician groups and specialty physicians who would ultimately refer to the surgeons.

Similar meetings were held with the individual surgeons within the academic departments of surgery at the Baltimore campus, who were charged to support the community integration. These included orthopedics, urology, neurosurgery and otolaryngology.

Through multiple meetings, a list was generated of the perceptions of the integration by the community physicians, and a list of the perceptions of the integration by the academic physicians (see Table 1a). The community surgeons felt that alignment with a large respected healthcare system could bring educational opportunities, decrease administrative work, and enhance negotiating positions for insurance rates. But, many surgeons were unsure an added benefit to their reputation as they were already established in the highly competitive market of Washington D.C. and Southern Maryland. Furthermore since many of these community surgeons had trained specialists from local programs, not all believed that alignment with a "big brother from the north" would be of benefit.

From the academic physicians' perspective in Baltimore, (Table 1b), many believed that the alignment with community hospitals would bring higher quality of care to the community and a potential for new referrals to their practices. Some were interested in performing services at the community hospitals and offered to obtain privileges. Many however, felt that aligning with community surgeons would result in discrepancies in compensation, as being part of an academic institution historically tolerated lower compensation. Also, many were concerned with awarding community physicians an academic appointment, which was not based on academic productivity and viewed as a business growth tool.

Ultimately, we found that the secret of success to the project was to build trust by being inclusive with clinical program development

Table 1a
Perceptions of the integration with community physicians.

- Community staff: PROs
  - CME opportunities
  - Group practice; decreased administrative work, succession planning
  - Negotiating position enhanced by alignment with system
  - Advantage of the affiliation with an academic center expertise
    - Potential for consults/referrals of complex cases
- Community staff: CONs
  - Referral patterns/alliances to local hospitals already exist
  - Don't need the affiliation to the academic center
    - Many were trained by local residencies, and were not going to be loyal to the new affiliation alignment
  - Cost of alignment

Please cite this article in press as: Zenilman ME, Freischlag J-A, The changing paradigm in surgery is system integration: How do we respond?, The American Journal of Surgery (2017), https://doi.org/10.1016/j.amjsurg.2017.11.031