Ten Facility Planning Trends for 2015
By Cynthia Hayward

The U.S. healthcare industry is in a crisis with healthcare reform and new financial incentives, constant demands for technology adoption and deployment, rising turf wars among specialists, an intense focus on patient safety, and aging physical plants. The following ten trends affect how new or renovated healthcare facilities are planned, designed, financed, and built.

1 Impact of healthcare reform. The Affordable Care Act (ACA) puts in place comprehensive health insurance reforms that will roll out over several years. Some of the key provisions of this law that will affect facility planning include:

- Encouraging integrated healthcare. The new law provides financial incentives for physicians to join together to form accountable care organizations (ACOs). In an ACO, physicians and various other healthcare providers take responsibility, in a collaborative and formally integrated arrangement, for coordinating the care of a specific patient population — from prevention to acute care to chronic care and disease management.

- Reducing paperwork and administrative costs. The new law institutes a series of changes to standardize billing and requires health plans to begin adopting and implementing rules for the secure, confidential, electronic exchange of health information. Using electronic health records will not only lessen paperwork, reduce medical errors, and improve the quality of care, but will also change how and where many healthcare professionals do their work.

- Bundled payments. The law establishes a national pilot program to encourage hospitals, physicians, and other healthcare providers to work together to improve the coordination and quality of patient care. Hospitals and physicians will receive a flat rate for an episode of care rather than the current fragmented system in which each service or test is billed separately. The entire team is compensated with a “bundled” payment which provides incentives to deliver health care services more efficiently while maintaining or improving quality of care.

- Improving preventive health coverage. To expand the number of Americans receiving preventive care, the law provides new funding to state Medicaid programs that choose to cover preventive services for patients at little or no cost.

2 Rapid adoption of electronic health records. Due to new financial incentives, physician practices and hospitals may finally become paperless. The ACA provides financial incentives to encourage the adoption of electronic health record technology. As of 2014, all public and private
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healthcare providers and other eligible professionals must have adopted and demonstrated “meaningful use” of electronic health records in order to maintain their existing Medicaid and Medicare reimbursement levels. A related initiative, “enterprise imaging,” is likely the next development in image storage and management. This will take the responsibility for imaging management away from radiology and place it into the hands of the enterprise-wide information technology function. All imaging data from disparate systems throughout the hospital — such as radiology, cardiology, pathology, orthopedics, and ob-gyn — will be available in one place via the patient’s electronic health record. With this evolution, all clinical data will be available, easily accessible, and useable to provide coordinated patient care that is not confined to department silos.

3 Advances in information/telecommunication technology are creating new staff positions and job descriptions, and altering historical perceptions regarding necessary functional relationships. Many traditional health and financial data management functions are being consolidated — such as medical records, quality assurance, risk management, infection control, finance, data processing, and telecommunications — as data become increasingly computerized and common databases generate data more quickly and effectively. At the same time, new interdisciplinary fields are evolving — such as health informatics — that will require healthcare professionals with the skills and knowledge necessary to develop, implement, and manage information technology software and applications in a medical environment.

4 Convergence of diagnostic and interventional imaging and surgical procedures. While imaging procedures are becoming more interventional and no longer limited to diagnostic procedures, surgery is becoming less invasive. For many years, real-time imaging, using a mobile ultrasound or endoscopy unit or a c-arm (its name derived from its shape), has been a standard part of the surgical operating room. Today, the hybrid operating room has permanently installed equipment such as intraoperative computed tomography (CT), magnetic resonance imaging (MRI), and fixed c-arms — typically used in conjunction with cardiovascular, thoracic, neurosurgery, spinal, and orthopedic procedures — to enable diagnostic imaging before, during, and after a surgical procedure. This allows the surgeon to assess the effectiveness of the surgery — and perform further resections or additional interventions — all in a single encounter. Many equipment vendors now offer highly specialized, proprietary imaging systems that are permanently integrated with the operating room while others offer designs that position the CT or MRI with dual access so the equipment can be used independently for diagnostic procedures when surgery is not in progress.
Turf wars. Interventional radiologists — using their expertise in angioplasty and catheter-delivered stents to treat peripheral arterial disease — were the first minimally invasive specialists. As cardiologists and vascular surgeons increased their use of interventional techniques, territorial disputes started to emerge. The specialties of interventional radiology, interventional cardiology, and endovascular surgical neuroradiology are all perfecting the use of stents and other procedures to keep diseased arteries open, and they are evaluating new applications. The rapid development of new imaging technologies, mechanical devices, and different treatment options, while certainly beneficial to the patient, can also lead to ambiguity regarding specific specialty claims on certain techniques and devices. These practitioners are often in competition with each other, thus creating “turf” wars.

Operations reengineering and ongoing process improvement. With continued pressures to reduce the cost of labor as well as other expensive resources, healthcare organizations are expanding manager and supervisor responsibilities and merging departments to share staff, equipment, and space. The resulting new organizational structures are becoming compressed and flatter. Narrowly defined job descriptions are being revised to reflect opportunities for cross-training and increased responsibilities. Improving patient throughput allows healthcare organizations to optimize their resources, often using “lean” process improvement. Regardless of the process, operational improvement generally focuses first on improving operations, apart from making any physical improvements. Once lean processes are established, an organization can look at how physical improvements might further enable operational improvements. An iterative approach is necessary to reach consensus on the appropriate balance between improving operational processes and investing capital in facilities.

Consolidation. The U.S. healthcare delivery system has been undergoing consolidation for many years and healthcare reform may propel this trend. In 2013, the number of hospitals and hospital beds involved in mergers reached a five-year high (AHA and Avalere Health 2014). In addition, healthcare systems are acquiring physician practices, outpatient surgery centers, and imaging centers at a record pace. The remaining independent physicians are joining forces and assembling into large, multispecialty group practices. Radiology “super” groups are also evolving to compete locally, as well as nationally, which is made possible by teleradiology technology that allows 24/7 access to images from any location. Healthcare systems are also reorganizing physically and operationally by specific disease-states or service lines — frequently with a “center of excellence” orientation — to optimize capital investments in expensive technologies, attract leading-edge physicians, and better market their services.
Reimbursement continues to impact service demand and location. Since 2008, the healthcare industry has experienced a reverse migration of sorts in the increasing acquisition by hospitals of private physician practices and independent ambulatory surgery and diagnostic centers, and their conversion to hospital outpatient departments (HOPDs). The goal is to optimize reimbursement for hospitals and lessen the risk for their owners, and ideally, improve coordination of patient care.

Intense media attention to patient safety. In December 1999, the Institute of Medicine (IOM), an arm of the National Academy of Science, reported that some 98,000 deaths and more than a million injuries occur each year due to medical errors. Since publication of IOM’s report, studies at major medical universities and healthcare organizations around the world have advanced our understanding of where these medical errors occur. It is widely believed, based on analytical research, that the original estimates were significantly understated simply because the data was not captured or reported effectively in most organizations. The focus on patient safety has led healthcare organizations to redesign work processes, implement new technologies, and rethink the design and layout of key spaces. The rapid adoption of barcoding, the emphasis on medication safety zones, and the use of standardized layouts for inpatient rooms and treatment spaces, are all a result of patient safety concerns.

Aging facilities. Like any other business, healthcare organizations need to continually maintain and update their physical plants, upgrade and retool their facilities to meet changing demand, and invest in new technologies. However, the investment required for healthcare facilities today is staggering due to the high cost of technology deployment, regulatory compliance, and upgrading physical plants for which ongoing maintenance may have been deferred for decades. Hospital facilities are aging — from 2005 to 2008, the average age of the plant held at about 9.5 years. But from 2009 to 2013, the average age increased to more than 11 years, which indicates that there is insufficient investment in healthcare facilities (Truven Analytics 2014).

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REFERENCES