

Voices on Value

In the Voices on Value series, AHA will highlight the viewpoints of independent experts in the health care field on issues related to affordability, value and health care cost. As such, opinions expressed by the authors do not necessarily reflect the policy of the American Hospital Association.

Integrated Practice Units (IPUs)

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This is part two of our series discussing Value-Based Health Care (VBHC), what it is, and how to implement it. The previous issue outlined the six components of the Value Agenda. In this issue, we discuss the first component: organization in health care delivery.

Despite shifts toward value-based care in recent years, several challenges remain to maximize the value of care. Poor organization in the delivery of care is a primary barrier. Providers remain organized by specialty departments like primary care, orthopedics, oncology, anesthesia, radiology and pharmacy. This structure delivers fragmented and siloed care to patients, who must coordinate their care across a wide spectrum of providers in different organizations and locations. The lack of communication and collaboration across providers leads to duplicate and unnecessary tests, medical errors and sub-optimal care across a patient's care cycle. It also leads to clinicians treating complex conditions too infrequently to develop and sustain competencies.

With advances in medical knowledge, technology and techniques, it is increasingly unlikely that care for any condition can be optimally delivered by isolated clinicians. Individual specialists typically see a broad spectrum of patients with medical conditions. For example, orthopedic surgeons may treat patients with knee and hip osteoarthritis, torn rotator cuffs, broken and sprained ankles, and fractured wrists. But the treatments for these various conditions are very different, and research

has shown that *high volumes are associated with superior outcomes*. Yet, low-volume providers continue to perform complex care. In California, 39 percent of pancreatic and liver cancer surgeries and 9 percent of breast cancer surgeries were performed in a hospital that did only one or two procedures in 2014.¹ Additionally, in the U.S. 20 percent of total knee replacement surgeries are performed at hospitals with volumes below the adequate minimums.² Such low-treatment volumes are associated with poorer patient outcomes and higher costs. Pancreatic cancer patients treated in low-volume centers have a 25 percent higher hazard of adjusted long-term mortality than patients treated in high-volume centers.³ Another study found that more than 70 percent of orthopedic surgeons doing complex shoulder surgery performed four or fewer of these per year, with the low-volume surgeons experiencing much higher rates of complications and readmissions.⁴

Businesses faced similar challenges a century ago. Companies were originally organized by functions, such as operations, sales, marketing, finance and purchasing, much as health care is organized today by clinical departments. As companies began to produce newer products for more diverse customers, the functional organization could not respond quickly to new technologies and emerging customer preferences. The solution, which emerged in companies such as DuPont, General Motors, and General Electric, was to create strategic business units, or SBUs, organized

around products and markets, rather than organizational functions. Each SBU incorporated all the functions and capabilities to create, produce and deliver the products and services that best met its targeted customers' preferences.

Health care can follow a similar path by creating new organizational units to deliver comprehensive, integrated and multidisciplinary care for specific medical conditions. Michael Porter, Harvard Business School's leading expert on competitive strategy, labeled this new organizational form an *Integrated Practice Unit* (IPU). In the first article in this series, we featured Hoag Orthopedic Institute, an IPU that treats joint osteoarthritis and other muscular-skeletal conditions. Its focused, dedicated teams treat a high volume of patients and deliver patient outcomes that are among the best in the country. In this article, we illustrate successful IPUs for other medical conditions and draw out the general principles for their creation and implementation.

MD Anderson Cancer Center

Traditionally, patients diagnosed with cancer may receive a treatment based on the initial specialist to whom they are referred by their primary care physician (PCP). Patients referred to a surgeon will likely have the tumor removed; those seen by a radiation oncologist will typically be irradiated, either externally or internally; and those referred to an oncologist will initially receive chemotherapy. MD Anderson Cancer Center (MDACC) realized that organizing care around traditional clinical specialties like surgical oncology, radiation oncology, and medical oncology created difficulty for patients who required care from more than one specialty or consultation among all the specialists to determine the optimal treatment. MDACC, in contrast, organizes care into 14 disease-specific centers, such as brain and spine, breast, colorectal, gastrointestinal, and head and neck. A medical director leads each center, and has the autonomy and authority to manage scheduling, referrals, operations, medical records,

budgeting and financial management. Each center has a multidisciplinary clinical team of surgeons, oncologists, and radiation oncologists, along with nurses, technicians, psychologists and other relevant support staff who see patients only with that type of cancer. The multidisciplinary team develops standardized intake and treatment pathways and includes a patient navigator to help the patient and family implement the team's pathway across the care cycle.

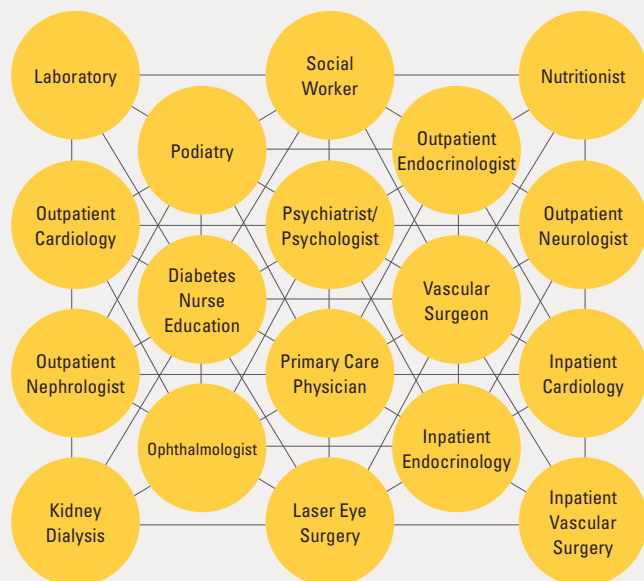
Patients receive an initial diagnosis within 24 hours, with difficult and complex cases discussed during a *weekly planning conference*. This 75- to 90-minute team conference occurs every Thursday afternoon to discuss the 40-50 new patients that week. In the Head and Neck Center, about 50 clinicians attend: surgical, radiation, and medical oncologists; head and neck radiologists and pathologists; and clinicians involved in dentistry, speech pathology and audiology. The primary oncologist for each patient proposes a treatment plan, which the team discusses until consensus is reached. Changes in treatment occur for one-third of patients. While the benefits from the team-based treatment processes have yet to be rigorously quantified, the clinicians believe that the conference improves outcomes, produces better care coordination, and likely decreases the total cost of treatment.

The condition-specific IPUs, with less fragmentation and better collaboration among clinicians, have contributed to MDACC's ranking as one of the top two cancer centers in the country for the past 17 years.

A Tale of Two Clinics in the Netherlands

Diabetes is a complex but treatable condition where patients usually bounce like a pin ball between multiple providers (see Figure 1). The patient's lack of a single point of contact leads, frequently and unnecessarily, to high-cost complications, such as stroke, amputation and blindness. Two Dutch endocrinologists, frustrated

Figure 1: Fragmented Care Model for Diabetes



with their inability to holistically manage Type-1 diabetes patients within a traditional academic medical setting, formed an independent clinic, called Diabeter. At the clinic, a multidisciplinary team of a physician specialist, nurse, dietician, psychologist, and care manager meets with the patient and family member for the full cycle of preventive and therapeutic care. One hundred percent of staff time is spent with Type-1 diabetes patients and diabetes research. Diabeter developed standardized pathways for treatment, along with a customized information technology (IT) platform that provides real-time patient and laboratory data to the care team and sends physician alerts and personalized emails to patients. Diabeter now has five identically-organized and staffed clinics that treat more than 2,000 patients per year. In 2017, Diabeter’s patients had the lowest rate of hospital admissions (<3 percent) among all Type-1 diabetes patients in the Netherlands; the highest percentage with HbA1C levels <7.5 percent; the highest satisfaction rating in the country (9.5/10); and the lowest annual cost of care.

The Netherlands Obesity Klinik (NOK) uses a similar approach for treating morbidly obese

patients, those with BMI>40, or >35 with a diabetes co-morbidity, at eight sites in The Netherlands. An interdisciplinary team of a physician, psychologist, dietician and exercise physiologist follows a standardized care pathway at each site. The pathway includes extensive pre-screening, bariatric surgery, pre- and post-surgery counseling, and five years of post-surgical treatment, focused on behavioral and lifestyle changes. All NOK administrative services, such as patient and PCP communications, outcomes measurement and reporting, are performed by a central organization. NOK’s patients report significantly higher quality-of-life scores due to sustainable total excessive weight loss of more than 50 percent, among the highest in Europe.

IPUs for Primary Care

Oak Street Health (OSH) is a venture-capital financed company, launched in 2011 to implement an IPU model for delivering primary care to low-income, elderly adults in underserved Midwest communities. Each OSH patient is cared for in storefront clinics by a multidisciplinary team that includes a physician, nurse practitioner, registered nurse, medical assistant, clinical informatics specialist, a care manager, an analytics support team, a podiatrist and a behavioral health specialist. The facility includes exam rooms and laboratory spaces in close proximity to ensure smooth transitions for patients. OSH contracts with local specialists for patients’ specialty care.

OSH uses an integrated IT platform that compiles daily reports from payers, hospitals and its partner specialty practices. Informatics specialists ensure that all relevant data are on hand during patient visits and that physicians integrate data into treatment processes. The care team meets during weekly “huddles” to review patient data and discuss treatments and patient trends. OSH’s Net Promoter Score (NPS), a measure of customer loyalty, is 91 compared to an average NPS of 3 for PCPs.⁵ OSH’s patients, compared to similar patient populations, had 40 percent reduced

hospital admissions, emergency room usage and readmission rates.

Kaiser Permanente Colorado introduced a similar IPU structure, called Primary Care Plus (PC+), to care for its most at-risk elderly patients, those in the top-two risk categories and whose spending is above the median for its risk group during the three previous years. PC+'s interdisciplinary team consists of a primary care doctor, palliative care specialist, nurse coordinator, clinical pharmacy specialist, and behavioral and social service specialists. The team develops a proactive care program, consistent with the patient and family's explicit life style goals. As the lead gerontologist stated, "Previously, we focused on patients after a hospitalization or discharge from a skilled nursing facility. For PC+, we decided to reach out to high-risk members even if they hadn't been hospitalized yet. This was a major cultural shift for us."

Physician and staff satisfaction with the interdisciplinary team model more than doubled, from 43 percent pre-pilot to 94 percent. Patients and their caregivers expressed high appreciation for the PC+ delivery model, especially the close and frequent contact with their designated nurse coordinator. Analysts measured the costs for a six-month pre-enrollment period and 12-month post-enrollment period for an initial cohort of PC+ members as well as for a control group of patients, matched by care group, gender and age. Total costs for the control group increased by 22 percent per person per month (PPPM) while those for the PC+ members remained flat. PC+ members had 21 percent higher PPPM office visit costs but 15 percent lower PPPM pharmacy costs and 75 percent lower PPPM inpatient costs compared to the control group.

IPUs: A Better Way to Organize Care

These examples, for acute, chronic, and primary care, illustrate the benefits from the IPU structure. An IPU concentrates volume for a specific medical condition, enabling its multidisciplinary team to

develop deep expertise and capabilities for treating patients proactively over a full care cycle for the condition or focused patient segment. The IPU's experienced multidisciplinary team engages and educates patients, facilitating their compliance to treatment protocols and minimizing their incidence of adverse events. Michael Porter has summarized the features that make IPUs effective and efficient.

1. An IPU is organized around a medical condition or set of closely related conditions. For primary care, an IPU is organized around a segment of the population with similar medical needs, like frail elderly or adults with multiple comorbidities.
2. Care is delivered by a dedicated, multidisciplinary team, whose members see themselves as part of a common organizational unit (the IPU). Team members devote a significant portion, typically 100 percent, of their time to the medical condition.
3. The IPU team takes responsibility for the full cycle of care for the condition, including outpatient, inpatient, and rehabilitative care, as well as supporting services, such as nutrition, social work, therapy and behavioral health.
4. The IPU team meets formally and informally on a regular basis to discuss care plans for individual patients, process improvements, difficult cases and how to improve patient outcomes.
5. Patient education, engagement, adherence and follow-up are integrated into care. A physician or clinical care manager serves as a single point of contact between the patient and the IPU, and to monitor the patient's compliance and progress.
6. The IPU team is co-located in a dedicated facility that has the necessary equipment and space to treat the condition. A hub and spoke structure can be used to incorporate multiple or affiliated sites, and for virtual team meetings.

7. The IPU is led by a medical director and has a single administrative and scheduling structure.
8. The IPU accepts joint accountability for patient outcomes and costs. It measures outcomes, costs and processes for each patient using a common measurement platform. Feedback and process improvements are implemented quickly and efficiently to improve patient care and outcomes.

Low-volume conditions can use part-time IPUs that meet for only a half-day or single day each week. For example, at Massachusetts Eye and Ear, an *aerodigestive IPU*, consisting of an ENT, gastroenterologist, pulmonologist, and speech and swallow specialist, meets one day a week to treat children with laryngeal clefts. This meets the demands for integrated aerodigestive care in the region while allowing the various specialists to treat other conditions during their non-IPU days.

Measuring and Paying for Performance

IPUs provide a great foundation for measuring outcomes and costs over the full cycle of care for every patient, topics for parts three and four in this series. With condition-specific outcomes and cost, clinicians can identify and implement best practices for continually improving patient

outcomes and optimize care over the care cycle. As the examples illustrate, IPUs *spend more time* in patient contact, diagnosis, communication, education, monitoring and compliance but incur lower total costs due to significant reductions in complications and hospital admissions. These benefits can be realized when IPUs accept payment through bundled payment contracts, as will be discussed in part five in this series.

Teamwork is fundamental to address complex customer needs in all industries; clinical care is no different. IPUs help the clinical, behavioral, and rehabilitation staff within each IPU team develop deep expertise in treating specific conditions and trusted relationships among themselves. These produce continuous learning and rapid introduction of new, innovative treatments and technologies. The result is a shift from fragmented, disorganized, inefficient care to care that is integrated, comprehensive, effective, and efficient.

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