

# Value Realization: An Unattained Challenge for Integrated Practice Units

*Pankaj Jain, PhD, MBA, PgMP; Bhav Jain, BS; Urvish Jain; and Sandeep Palakodeti, MD, MPH*

In his landmark framework on value-based health care (VBC), Michael Porter proposed the organization of condition-based care delivery through integrated practice units (IPUs).<sup>1</sup> Conceptually, IPUs colocate clinicians, support specialists, and requisite care delivery services to effectively manage the end-to-end spectrum of medical conditions and garner large volumes by becoming a de facto center of excellence and multidisciplinary competency for chronic conditions, such as diabetes, hypertension, and breast cancer. The colocated team meets regularly to develop care plans, process improvements, and metrics for outcomes. IPU pilots with these characteristics have multiplied over time into many community specialty clinics, outpatient clinics, patient-centered medical homes, primary care transformations, ambulatory intensive care units, and infusion centers, bringing a flair of retail and competition to health care, but the critical question remains: Do these units achieve the Quadruple Aim of modern health care by improving the cost of care, health outcomes, patient experience, and provider experience?

A patient with multiple conditions can benefit from properly structured IPUs instead of experiencing multiple referrals and hand-offs at single-specialty clinics. For example, 20% of knee replacements in the United States are performed at low-volume specialty centers or hospitals with infrequent opportunities to build competency, leading to poorer patient outcomes.<sup>2</sup> IPUs also save patients the pain and cost of visiting large hospitals, provide additional safety from exposure to iatrogenic diseases, and offer personalized care directly in communities. Both advocates who call these IPUs bridges of coordinated care and critics who call them ineffective archipelagos differ on their value propositions.<sup>3</sup> With widespread VBC pilots around the world, however, there appears to be a general consensus that the IPU is a core care delivery model that can innovate health care, even if it is not a panacea for all its ills.

We examine 6 critical challenges and propose recommendations to improve the efficacy of and value realization by IPUs: (1) scalability, (2) optimal workflow design and effective scheduling, (3) standardized metrics for performance and outcomes, (4) new competencies and behaviors, (5) patient-centered health care technology, and (6) fair value-based risk sharing (Figure).

## ABSTRACT

Central to the Porter-Lee value agenda, integrated practice unit (IPU) pilots have multiplied over time, striving to fundamentally reorganize the delivery of care via multidisciplinary teams while improving outcome measurement and driving competitive volumes. As these pilots emerge to form bridges of coordinated care, critics continue to question the value proposition of these IPUs: Do they achieve the Quadruple Aim of modern health care by improving cost of care, health outcomes, patient experience, and provider experience? Noting that value realization has eluded IPU pilots globally over the past 15 years, the authors examine 6 critical challenges and propose recommendations to consistently deploy effective IPUs, leading to a win-win proposition for all key stakeholders.

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**Scalability: The Key to Effectiveness**

Despite several successful IPU pilots across the world, their performance and return on investment are far from being consistent, as IPUs need large customer bases to offset setup and operational costs. Patients with pancreatic cancer have a 25% greater hazard of long-term mortality at low-volume centers than at high-volume centers. MD Anderson Cancer Center has successfully organized care into 14 disease-specific centers that improved collaboration among multidisciplinary teams handling large volumes of patients. Similarly, the Diabeter, a Dutch practice, treats more than 2000 patients per year at 5 IPUs, achieving the lowest rate of hospital admissions and cost of care for type 1 diabetes nationally.<sup>2</sup> Although a shift from single-specialty centers and large hospitals to IPUs is promising, a recent systematic review by Cattel and Eijkenaar indicates that the evidence regarding cost-effectiveness and improved outcomes remains inconclusive.<sup>4</sup> Because IPUs are

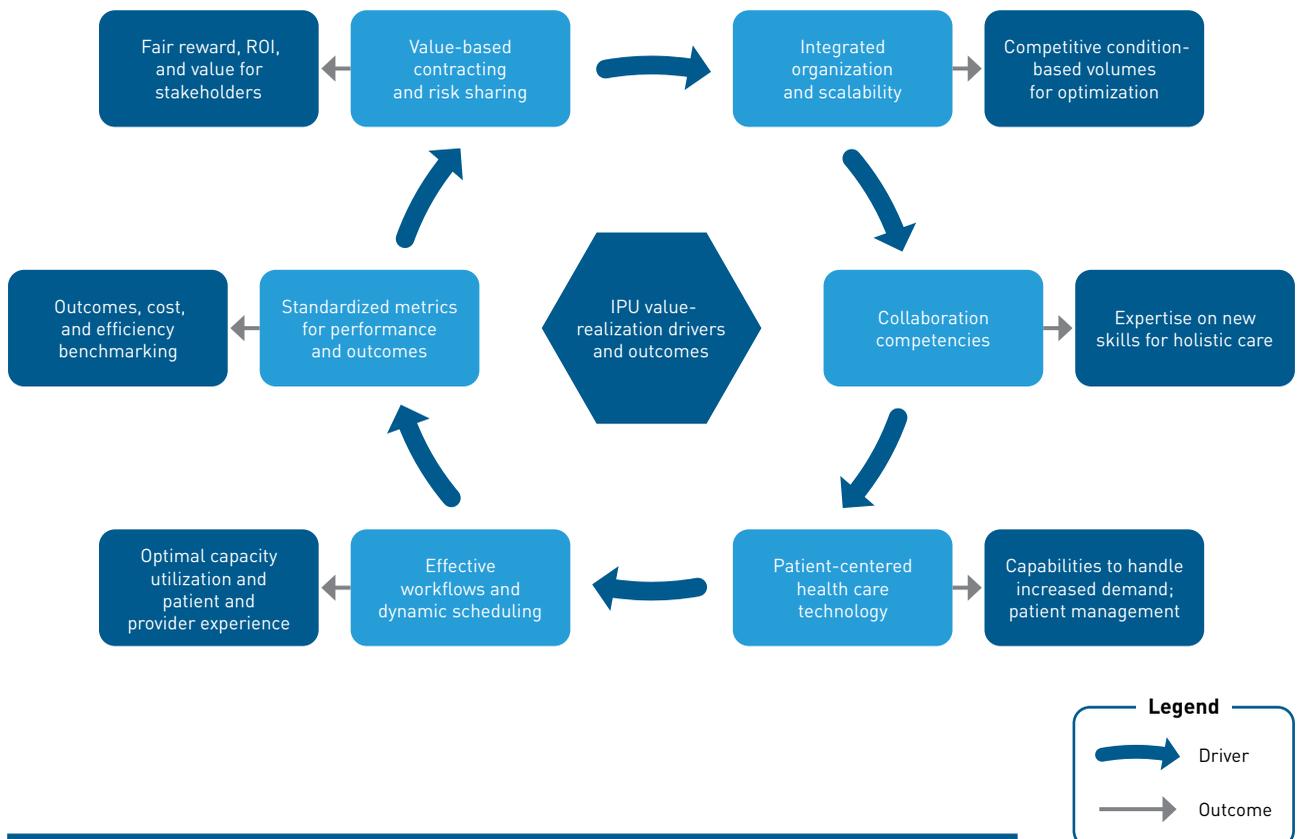
**TAKEAWAY POINTS**

Central to value-based health care, integrated practice units (IPUs) colocate clinicians, support specialists, and requisite services to effectively manage end-to-end care for complex conditions. Although several IPU pilots have emerged, critics question the value proposition of these so-called bridges of coordinated care. Overall, we recommend 6 means for IPUs to realize their value and meet the Quadruple Aim of health care:

- ▶ leverage competitive market-based approaches to increase adoption;
- ▶ incorporate preauthorized, dynamic care pathways for scheduling;
- ▶ develop standardized outcome measurement processes;
- ▶ administer training programs to improve provider collaboration competencies;
- ▶ establish suitable technology and partners to continuously adjust care delivery; and
- ▶ integrate risk-reward sharing between payers and IPU teams.

relatively unestablished entities in the health care ecosystem, they face the challenges of building credibility and avoiding perceptions of competition with mainstream hospitals. Moreover, increasing adoption and attracting break-even volumes at IPUs will continue to challenge proponents to explore novel partnership models such as clinically integrated networks (CINs) and market-based

**FIGURE.** Perpetual Benefits From Effective IPU Implementation



IPU, integrated practice unit; ROI, return on investment.

strategies from retail industries while frustrating those without an adequate understanding of critical success factors. To mitigate the risks associated with scalability, we recommend that IPU teams (1) use market-based strategies to increase patient adoption, (2) develop novel partnership models such as CINs, and (3) account for differing patient choices to win over rising competition. Increased volumes will support multidisciplinary staff, their competency development, and efficient operations to optimize cost.

### **Scheduling Care Pathway Challenges**

Another critical challenge facing IPU teams is ensuring an effective workflow design through new care models. Suboptimal pathways can result in poor patient scheduling with unacceptably long waitlists and underutilized care teams, resulting in patient dissatisfaction and cost overruns.<sup>5</sup> For effective care scheduling, dynamic workflow templates for patient appointments can minimize waiting time by accounting for system randomness, lead time before and during visits, disruptions due to late arrivals, workflow changes, and unplanned absences by patients or providers. Growing personalization and overrunning sessions can increase the workload at IPU teams, leading to increased congestion at clinics, patient dissatisfaction, and erosion of staff morale. Advanced scheduling technology, such as artificial intelligence (AI)-based machine learning algorithms, can train and dynamically adjust scheduling and operational systems to account for capacity and randomness with longitudinal data. Additionally, preauthorized care pathways at IPU teams can improve speed and convenience for patients.

### **Standardized Metrics for Performance and Outcomes**

IPU teams need to develop standardized metrics for benchmarking operational performance and patients' health outcomes. The International Consortium for Health Outcomes Measurement has developed evidence-based indicators to measure quality and health outcomes, but they lack wide adoption. If standardized metrics were to be established across the industry, IPU teams could benefit by benchmarking and improving their quality and operational performance while transparently communicating their competitive advantages to stakeholders. High-performing IPU teams could thus negotiate better contracts and claim improved reimbursements from payers while passing cost savings directly to patients.

### **New Skills and Behaviors for Integrated Teams**

Traditional clinical practices do not require clinicians to operate in teams over the full treatment cycle.<sup>1</sup> This presents a potential danger: IPU teams may end up reorganizing the existing workforce and workflows without providers acquiring the prerequisite competencies. Highly functioning IPU teams need clinicians to acquire new collaboration and facilitation skills alongside their medical expertise. Interdisciplinary teams need to be accountable for holistic patient case management by focusing on relationships, patient scheduling, care coordination, medication adherence, routine follow-ups, and broader social determinants of health (SDOH). These new competencies

require the development and administration of thorough training programs for IPU teams. As such, medical schools and residency programs should prepare clinical staff for these critical skills at the outset; for example, instead of assigning a set number of patients to each resident physician, a single patient should be assigned to a multidisciplinary team of residents who collaboratively provide holistic care for condition-based diseases.

### **Patient-Centered Health Care Technology for IPU Teams**

Health care technology plays a critical role in various touchpoints between patients and IPU teams. Patient-centered platforms enable bidirectional communications, from scheduling care and sharing care pathways to recording treatment data and dashboarding outcomes in real time. Indeed, COVID-19 has catalyzed digital health as integral to care delivery. To contain the significant fixed costs of technology, most vendors are offering per-member per-month usage costs and partnering with payers and providers to enhance their platform capabilities at no charge.<sup>6</sup> Advanced IPU teams are leveraging predictive analytics to project which patients are most likely to achieve desired health outcomes based on the medical condition or a group of conditions, patient history, patient-reported outcomes, and clinical progress made. We recommend that IPU leaders perform a deep assessment of their technological needs and establish suitable technology and partners to develop AI-based algorithms that continuously adjust care models, dynamic scheduling, and operational performance to improve patient outcomes. Moreover, technology needs to support comprehensive patient management and strong electronic health record solutions.

### **Value-Based Contracting and Risk Sharing for IPU Teams**

The IPU model requires fair risk-reward sharing across the value chain. Payers need to own accountability for insurance risk and providers for the performance risk for IPU teams to achieve their intended objectives of improved business performance and patient health outcomes. The challenges, however, have been to sustain this value matrix longitudinally, extend incentives to care delivery teams, and ultimately pass cost savings to patients. Although a plethora of reimbursement methods and contracting, performance, and outcome metrics have been explored by the industry, there is a lack of consistency in their implementation among IPU teams, and stakeholders' lack of confidence in the repeatability of performance stalls progress.<sup>1</sup> As a result, patients continue to be subjected to the fee-for-service model with little incentive for care management teams at IPU teams. Support services addressing behavioral health and SDOH are not typically covered under fee-for-service or value-based contracting, thereby constraining the intended packaging of care at IPU teams. To be cost-effective, these support services can be shared across multiple IPU teams. Our recommendation is to expand value-based contracts to cover both shared and IPU-specific services required for managing end-to-end care. Taking a leaf from the CMS Oncology Care Model and the Comprehensive End-Stage Renal Disease Care Model, it will be beneficial to develop flexible bundled and alternate

**TABLE.** Challenges Affecting Value Realization for Integrated Practice Units<sup>1-7</sup>

| Challenge   | Description  | Recommendation  | Value realization   | Literature references  |
|---|--|---|---|--|
| Scalability   | Without achieving break-even volumes, IPU cannot develop competency or reduce cost per patient.  | <ul style="list-style-type: none"> <li>• Use market-based strategies to increase patient adoption</li> <li>• Develop new partnership models, such as clinically integrated networks</li> <li>• Account for patient choices to win over competition</li> </ul>   | Increased volumes will support multidisciplinary staff, competency development, and efficient operation at IPUs that will optimize cost.  | Kaplan and Wolberg (2019) <sup>2</sup> ; Porter and Lee (2021) <sup>1</sup>  |
| Effective workflow design and care pathway scheduling | Rising volumes at IPUs can result in long waiting times, workflow disruption, and a congested system with underutilized capacity.                                | <ul style="list-style-type: none"> <li>• Leverage AI-based dynamic scheduling approaches that account for system capacity, randomness, and lead-time challenges to adjust workflows</li> </ul>  | An effective scheduling system will optimize operations, improve patient experience, and enhance staff productivity.  | Bergental (2008) <sup>3</sup> ; Porter and Lee (2021) <sup>1</sup>   |
| Standardized performance and outcomes metrics         | There is a lack of consensus across health care organizations to develop and adopt standardized performance and outcome metrics.                                 | <ul style="list-style-type: none"> <li>• Develop standardized metrics to benchmark comparative operational performance and effectiveness in achieving patients' health outcomes</li> <li>• Longitudinal measurement of quality, operational performance, and health outcomes will help IPUs in designing target costs, making the right investments, and owning fair risk-reward in the value chain for contribution.</li> </ul>            | IPUs will benefit by benchmarking against standardized metrics and transparently communicating their competitive advantage in achieving the Quadruple Aim to stakeholders. High-performing IPUs can thus negotiate better contracts, claim improved reimbursements from payers, and pass cost savings directly to patients. | Cattel and Eijkenaar (2020) <sup>4</sup> ; Kaplan and Wolberg (2019) <sup>2</sup> ; Porter and Lee (2021) <sup>1</sup> |
| Development of new skills                             | Traditional clinical practice does not provide coordination and collaboration competencies needed for IPU operation.   | <ul style="list-style-type: none"> <li>• Develop training programs for clinicians to gain project management, care coordination, and relationship management competencies</li> <li>• Medical schools and residency programs to introduce care facilitation competencies and patient assignments simulating multidisciplinary units</li> </ul>   | Effective team development and collaboration will enable smooth hand-offs and improved outcomes, leading to positive patient experience and team morale.  | Kumar et al (2015) <sup>5</sup> ; Porter and Lee (2021) <sup>1</sup>   |
| Patient-centered health care technology               | Without suitable health care technology, IPUs will struggle to coordinate and deliver care at each touch point with patients.                                    | <ul style="list-style-type: none"> <li>• IPU leaders must perform a deep assessment of the technological needs of their units to establish suitable technology and partners.</li> <li>• Leverage patient-centered platforms that capture the patient journey and enable easy bidirectional communication with patients</li> </ul>   | AI-based algorithms can continuously adjust care models, dynamic scheduling, and operational performance to improve patient outcomes and experience.  | Porter and Lee (2021) <sup>1</sup> ; Shah and Schulman (2021) <sup>6</sup>   |
| Value-based contracting and risk sharing              | Without fair risk-reward contracting and incentive sharing, costs will move within the ecosystem without benefiting payers, providers, care teams, and patients. | <ul style="list-style-type: none"> <li>• Payer to own accountability for insurance risk; IPU to own accountability for performance and outcomes</li> <li>• Innovate and expand the value-based contracts to cover shared and value-added services required for the conditions</li> <li>• Develop flexible bundled and alternative payment models as IPU trains the system with longitudinal patient outcomes and IPU performance</li> </ul> | Fair sharing of risk and reward will enable passing the incentives to care teams and savings to the patients. This will in turn motivate the benchmarking and development of performance and outcome metrics across the IPUs.   | Cattel and Eijkenaar (2020) <sup>4</sup> ; Lyss et al (2020) <sup>7</sup>  |

AI, artificial intelligence; IPU, integrated practice unit.

payment models, adjusted for longitudinal patient outcomes and IPU performance.<sup>7</sup>

### Future of IPUs

In the short term, we predict that IPUs will continue to emerge due to the intuitive VBC phenomenon. However, without thoughtful implementation of all critical success factors (Table<sup>1-7</sup>), value

realization will continue to elude most IPUs, as has been the case for the past 15 years. Stakeholders should understand the prerequisites and assess the impacts of effective IPU operations before venturing into this space to avoid undesirable outcomes and financial loss. To accelerate value realization, IPUs need to robustly implement the key value drivers by leveraging market-based approaches to increase adoption and optimize cost, incorporating preauthorized

care pathways for scheduling, developing standardized metrics for outcomes, improving collaboration competencies in care teams, utilizing the right health care technologies, and integrating risk-reward sharing between payers and IPU teams. ■

**Author Affiliations:** Highmark Health (PJ), Pittsburgh, PA; Indiana University of Pennsylvania (PJ), Indiana, PA; Massachusetts Institute of Technology (BJ), Cambridge, MA; University of Pittsburgh (UJ), Pittsburgh, PA; Case Western Reserve University (SP), Cleveland, OH.

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**Address Correspondence to:** Sandeep Palakodeti, MD, MPH, Case Western Reserve University, 10900 Euclid Ave, Cleveland, OH 44106. Email: sandeep.palakodeti1@gmail.com.

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