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CASE STUDY

Transitioning to Value-Based Hospital Medicine: A Sound Investment?

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Sound Physicians, which provides hospitalist, intensivist, and emergency medicine services nationwide, decided in 2014 to focus its clinical strategy and resources on value-based payment models, starting with the federal Bundled Payment for Care Improvement (BPCI) program. The company' s goals included extending its value proposition for hospital partners, generating new revenue streams, and developing a core competency in managing total costs around hospitalizations that could be applied to other risk-based populations. The pillars of its clinical execution strategy included physician ownership of total cost of care, consistent transitional care models, investment in enabling technology, and effective post-acute care partnerships. Sound's success in BPCI came slowly, but gross savings rates improved steadily to almost 10% by year 4 of the program, driven in part by reductions in the use of skilled nursing facilities at discharge.

KEY TAKEAWAYS

- Clinical and financial success in value-based hospital medicine requires dedicated resources and focused management of patients enrolled in risk-based payment programs, including Bundled Payments for Care Improvement Advanced (BPCIA).
- Advance care planning and transitional care are time-intensive for physicians, not well reimbursed, and hard to apply to all patients.
- Dedicated population health teams of physicians with an interest in and aptitude for value-based care will produce considerably better results than more traditional staffing models.
- Hospitals and physician groups participating in value-based care models succeed by reducing someone else's revenue. The net result is winners and losers and care changes that focus on

a narrow set of spending levers. In their current form, these models also imply diminishing returns for participants.

» Payers and policy makers should aim for more holistic value-based payment models that reward all parties for success in reducing total costs of care.

» In addition to securing physician buy-in, establishing clinical and financial alignment between physician groups and hospitals is critical to success with value-based hospital medicine.

The Challenge

The transition from fee-for-service medicine to value-based care implies unique challenges for different types of health systems. For Sound Physicians, that challenge was to develop care models and enabling technology that could be applied at scale and across very heterogeneous practice environments. As a national physician practice company based in Tacoma, Washington, Sound employs approximately 4,000 physicians and advanced practitioners working in 300 hospitals in 40 states. Those care models would need to be carefully designed to avoid disrupting other aspects of clinical care, and they needed to be successful enough from a financial perspective to support Sound's underlying investments in people, processes, and technology.

The transition to value-based care reflected a notable inflection point in Sound's evolution. At its founding in 2001, Sound's focus was helping its hospital partners meet hospitalist staffing needs. As it grew, Sound invested in clinical care models, standardization, and information technology aimed at improving traditional measures of clinical performance, including length of stay and patient experience. As the hospital medicine field matured, however, Sound felt pressures on its operating margins as physician compensation increased faster than its hospital partners were willing or able to subsidize. While hospitals continued to insist on differentiated performance on traditional clinical metrics, a small but growing subset also began to ask how Sound could help them succeed under evolving value-based payment models.

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In that context, Sound entered the Centers for Medicare & Medicaid Services' (CMS) Bundled Payment for Care Improvement (BPCI) program in 2015 as a launch point for its investment in value-based care. Under the BPCI program, participants accept a fixed payment (target price) for all services involved in 90-day episodes of care triggered by an acute care hospitalization for a specified clinical condition. (CMS provides a menu of approximately 30 clinical bundles from which participants can select.) Target prices, which generally reflect historical spending in given markets, are discounted (originally 2%, now 3%) to guarantee savings back to CMS. Participants earn gainsharing revenue to the extent that actual spending falls below target prices.

Table 1. Sound Physicians' Clinical Strategy for Value-Based Hospital Medicine

Clinical strategy	Most important components
Physician ownership of total cost of care	• Consistent messaging and education — reducing overutilization improves clinical outcomes and care experience for patients • Metric-driven financial incentives — cost-related for physician leadership (e.g., regional medical directors and hospitalist chiefs) and quality-related for clinicians (e.g., physicians and advance practice providers)
Consistent clinical care model	• Special focus and (sometimes) dedicated teams for BPCIA and other high-risk patients • Structured, reimbursable advance care planning in all 65+ and high-risk patients • Two-week home health protocols that are structured, front-loaded, and tailored to needs of individual patient • Selective referral to high-quality network among patients requiring SNF or home health care following discharge • Hospitalists see potential readmissions early in emergency department evaluations
Enabling technology	• SoundConnect — software platform for managing billing and all clinical workflows related to value-based care • SoundMetrix — predictive analytics for identification and tailored management of high-risk patients; performance feedback based on clinical, hospital, and claims data • Telemedicine — used to manage and reduce admissions in patients in SNFs
Partnerships for post-discharge care	• Partnerships with health systems or third-party companies for managing SNF length of stay, other aspects of care coordination

SNF = skilled nursing facility. Source: The authors.

The Goal

Sound' s strategy was informed by four overarching goals: (1) expand its value proposition to hospital partners by ensuring their financial sustainability in a value-based payment environment, (2) augment its own fee-for-service revenue with value-based payments, (3) develop new strategic relationships with commercial payers, and (4) position itself for success with the alternative payment models of the future. From a short-term tactical perspective, Sound hoped to use revenue from BPCI success to support care model redesign and investments in supporting infrastructure. Over the longer term, Sound aspired to apply that new competency in managing acute-care episode spending to other value-based payment programs, including accountable care organizations (ACOs), Medicare Advantage, and other capitated plans.

The Execution

In developing its clinical strategy, Sound recognized that spending for 90-day episodes of hospitalization accounts for approximately half of total Medicare Part A and B spending in the fee-for-service population. Of spending around hospitalization episodes, about half is payments to the acute care hospital and, under diagnosis-related group (DRG) payment models, is not directly influenced by the clinical decisions of physicians. Instead, Sound decided to focus on the other, more actionable half of the spending, including readmissions and post-acute care (PAC) utilization after discharge, which varies widely across hospitals. More broadly, given the age and chronic illness associated with hospital medicine patients (90-day mortality in Sound BPCI patients has been over 20%), Sound also sought to align overall intensity of care with patient preferences and improve end-of-life care. Its execution strategy has comprised four main components (Table 1).

The four components of the execution strategy form a clinical strategy for value-based hospital medicine:

Physician Ownership of Total Cost of Care

Getting physicians to manage overutilization and costs as intently as they do quality is the cornerstone of Sound's strategy. Sound messages value-based care exclusively in patient-centered terms, sharing scientific evidence that patients have better clinical outcomes and care experience when physicians help them go home and avoid overly aggressive care not aligned with their preferences and values.[1,2] All physicians undergo onboarding and ongoing training sessions on clinical processes that help patients achieve those goals. Physician leaders (e.g., regional medical directors and chiefs) receive a management bonus tied to PAC utilization and readmission rates. Frontline clinicians (e.g., physicians and advance practice providers) receive a modest incentive for advance care planning services. To avoid the perception that Sound is rewarding them for withholding medically necessary care, clinicians are not directly compensated according to utilization metrics.

Consistent Clinical Care Models

While encouraging local innovation, Sound established a common set of clinical expectations for implementation at all hospital sites, based on published best practices and its own experience. Within 24 hours of patient admission, physicians specify the day of expected discharge and medical, physical, and social barriers to discharge home on all patients. Patients in specific risk programs (e.g., BPCI) and so-called focus patients — those at equipoise between going home and to a PAC facility — are managed by clinical performance nurses, who do not provide direct patient care but rather ensure physician involvement in transitional care activities.

> *"The first, most common hurdle among hospital systems with earlier and larger commitments to population health is territorialism: a 'We got this' attitude."*

Physicians advise on home health care, which is generally structured as front-loaded, condition-specific, 2-week protocols. Patients being discharged to a skilled nursing facility (SNF) receive information from their physicians about high-quality facilities, as defined by readmission, length of stay, and other criteria. Finally, Sound's hospitalists receive SoundConnect alerts about patients returning to the emergency department after discharge and evaluate them there for care options other than readmission. Traditionally, such admission decisions are left to emergency medicine physicians, who have less familiarity with recently hospitalized patients and less incentive to send them home. In Sound's experience to date, emergency medicine physicians have supported hospitalist involvement in these decisions, and readmissions have fallen as a result.

These clinical workflows are expected of all Sound physicians. At selected sites, however, patients in BPCIA and other risk programs are managed by dedicated teams composed of hospitalists with particular interest in spending more time with patients and their families on their goals of care and on decisions about care plans and destinations after hospital discharge.

Enabling Technology

With its entrance into BPCI, Sound invested heavily in three core technology platforms to drive success with value-based care. First, it adapted its proprietary IT platform, originally designed for physician charge capture and census management, to enable value-based care workflows. Available as both desktop and mobile applications, SoundConnect flags BPCI and other risk program patients, provides clinical checklists based on patient diagnosis and risk, collects required quality indicator data, and identifies PAC facilities in Sound's high-quality network.

Second, Sound's analytic platform, SoundMetrix, incorporates administrative, clinical, and claims data and provides real-time, risk-adjusted, benchmarked performance feedback to both physician leaders and individual clinicians. In addition to ensuring accountability on key quality and cost metrics, SoundMetrix uses machine learning algorithms to identify patients at high risk for readmission and discharge to PAC facilities, who in turn receive additional attention from clinical performance nurses. Similar techniques are used to flag (with 80%–90% accuracy) BPCIA patients in real time, based on payer information, predicted DRG, admission status, and other variables.

Finally, Sound telemedicine, launched in 2019, has allowed hospitalists to extend their influence beyond hospital discharge and into SNFs. The service consists of video-enabled patient evaluations, staffed by a centrally coordinated physician pool. Requests for evaluations are triggered by bedside nurses; requests are managed and queued by acuity on a specialized IT platform. So far, readmissions in the SNF population has fallen from 23% to 15% in the first year of the SNF telemedicine pilot involving 12 sites. Plans for home-based telemedicine in high-risk patients are underway.

Partnerships for Post-Discharge Care

With the exception of telemedicine, Sound relies on partnerships for managing post-discharge care, focusing primarily on SNF length of stay. In addition to the population health teams of health system partners, Sound works with third-party companies specializing in PAC management, including Signify Health, Optum, and naviHealth.

The Hurdles

Physician buy-in to Sound's value-based care strategy has not been universal. As advance care planning and transitional care is time-intensive, some physicians complain that they lack the time for "nonclinical" care or that such responsibilities are better left to others, such as hospital case management staff. Others, particularly those trained in the era before population health, take a more cynical view of value-based care, saying, "Sound is just trying to make money." In this regard, Sound probably misstepped early on by messaging the BPCI program in terms of utilization and cost management, rather than focusing on the benefits of value-based care for patients. National shortages of hospitalists limit how aggressively Sound can respond to resistant physicians.[3] Fortunately, as value-based reimbursement becomes more familiar, physician acceptance of value-based care strategies seems to be growing over time, at least as reflected by clinical and utilization metrics.

Getting alignment with hospital partners generally has been an easier hurdle to overcome. Hospital systems occupy a continuum in terms of both preparedness and interest in population health and value-based payment models. With many of its partners, Sound has achieved high levels of clinical integration and financial alignment via gainsharing. Strong performance has tended to follow.

> *"Although reductions were spread across all types of services, indicating slight declines in overall care intensity, most of the savings rate improvement is attributable to decreases in the use of facility-based [post-acute care]."*

In some instances, however, Sound has encountered barriers to hospital alignment. The first, most common hurdle among hospital systems with earlier and larger commitments to population health is territorialism: a "We got this" attitude. Such partners focus on the workflows of hospital-employed case management and post-discharge care coordinators. They view physicians as less important to their success and have little interest in gainsharing with them. Second, some hospitals worry that focusing on value-based care will distract physicians from driving performance on traditional hospital metrics, like patient experience score (i.e., HCAHPS) and length of stay. They believe that sending patients to SNFs and inpatient rehabilitation facilities (IRFs) more frequently will reduce hospital length of stay (a view not supported by analysis of Sound's national data) and discount the salutary effects on patient experience of advance care planning and sending more patients home.[4,5] The third barrier is overt conflicts in financial interests. Simply put, hospitals with on-site inpatient rehabilitation units or joint ventures with SNFs and long-term acute care hospitals (LTACHs) do not want physicians working to reduce referrals to those facilities.

The Team

Value-based care and risk programs are led at the highest level at Sound. Its president and chief clinical officer oversee clinical strategy and relationships with payers, health systems, and PAC partners. A central population health team, led by a president and a chief medical officer, is responsible for administrative operations, contracts, analytics, and clinical execution. Each of the five geographical regions that define Sound's organizational structure has a vice president and a medical director who are responsible for carrying out population health operations in the field. While the population health department provides subject-matter expertise and operational support, primary responsibility and accountability for clinical and financial performance for BPCIA and other value-based payment programs rests with physician leaders in the field, including regional medical directors and hospitalist chiefs.

Metrics

Sound' s impact on total cost of care for episodes of hospitalization is reflected in the BPCI gross savings rate, which represents the relative difference between CMS-established target prices (based on historical spending) and actual spending during the 90-day episode of care. (BPCI and BPCIA

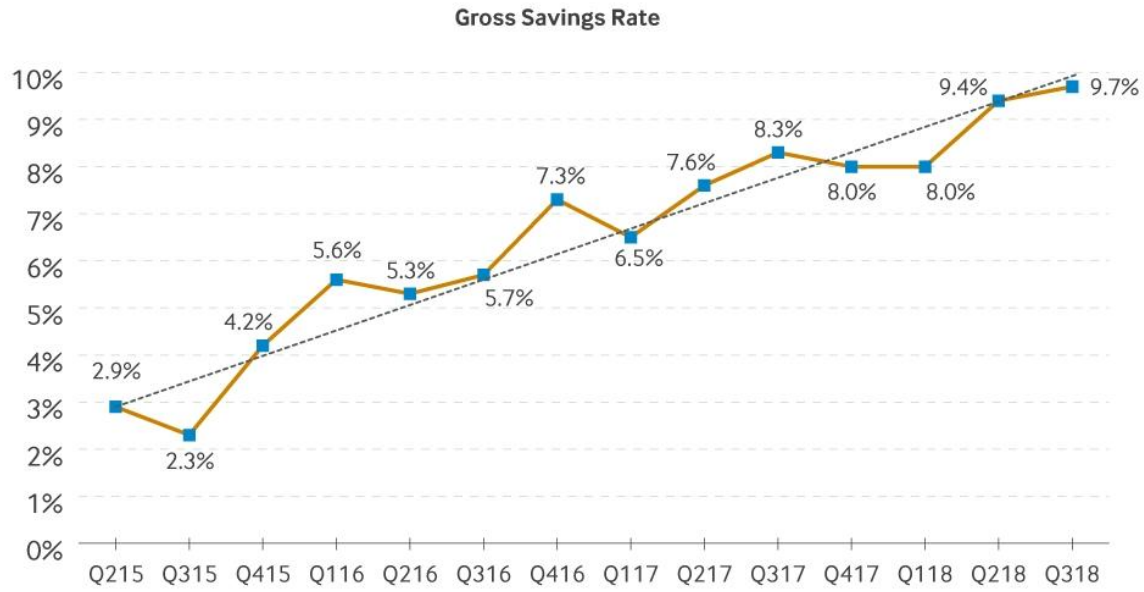
revenue is based on the net savings rate: gross savings rate minus the 2% or 3% CMS discount, respectively.)

As seen in Figure 1, Sound's gross savings rate with BPCI improved slowly over time, from approximately 2% in 2015 (its first year of participation) to almost 10% by the end of the original program in 2018. Some of that savings rate is no doubt attributable to bundle optimization, as CMS permitted participants to add well-performing bundles and drop poorly performing ones in the early years of BPCI. (It no longer does.) But based on Sound's internal analysis, more than half of the net savings rate improvement reflects reductions in actual spending with gradual learning and incremental refinements to Sound's clinical care model. Although reductions were spread across all types of services, indicating slight declines in overall care intensity, most of the savings rate improvement is attributable to decreases in the use of facility-based PAC.

FIGURE 1

Bundled Payment for Care Improvement (BPCI) Results Over Time

Gross savings rate is the relative difference between CMS target price and actual spend for 90-day episodes of care



Source: The authors

Adjusted for clinical bundle mix, the proportion of BPCI patients spending time in SNFs fell substantially over this time period, from approximately 30% to 25% (Table 2). Use of LTACHs fell from 1.8% to 1.1% and SNF length of stay declined by 1.3 days per stay. Conversely, the use of inpatient rehabilitation facilities remained relatively flat over the 4-year span, perhaps indicative of the large number of Sound hospitals with hospital-owned IRFs, which are particularly common in the southern United States. Sound also struggled to reduce 90-day readmission rates during this time period, which may reflect trends toward increasing acuity of inpatients nationwide. (Sound's

Table 2. Readmissions and PAC Utilization in Sound BPCI Population, Adjusting for Clinical Bundle Mix, Based on Reconciled Medicare Claims

	2016	2017	2018	2019*	Difference, 2019 vs. 2016
Episodes**	50,669	58,574	56,019	13,147	
SNFs (% patients to SNF upon discharge)	30.0%	28.5%	26.5%	25.4%	Down 4.6 percentage points
IRFs (% patients to IRF upon discharge)	5.3%	5.6%	5.5%	5.6%	Up 0.3 percentage points
LTACHs (% patients to LTACH upon discharge)	1.8%	1.7%	1.3%	1.1%	Down 0.7 percentage points
Readmissions (% patients readmitted from all discharges)	29.0%	29.1%	26.5%	28.6%	Down 0.4 percentage points
Length of stays in SNF (mean days)	28.2	27.2	25.4	26.9	Down 1.4 days
Advance care planning***	1.5%	8.6%	14.1%	19.6%	Up 18.1 percentage points

Notes: *Reflects data from Q1 2019, only. **Analysis to hospitals continuously enrolled in BPCI. ***Defined by physician evaluation and management claims. SNF = skilled nursing facility, IRF = inpatient rehabilitation facility, LTACH = long-term acute care hospital. Source: The authors.

overall case mix index has been increasing approximately 1% annually.) Finally, the use of advance care planning services (defined by physician evaluation and management claims) increased substantially, from less than 2% of patients in 2016 to almost 20% in 2019.

Return on Investment

Sound Physicians' bet in value-based hospital medicine has been extremely expensive — incremental costs related to value-based care at Sound are at least $25 million annually. That total comprises incremental costs related to Sound's clinical workflow technology platform ($3 million), analytics ($2 million), population health department leaders and subject-matter experts ($5 million), clinical performance nurses dedicated to managing risk-based patients ($10 million), and financial incentive payments ($5 million). These estimates do not include non- or poorly reimbursed physician time related to advance care planning, care coordination, and transitional care. Because Sound currently manages approximately 100,000 hospitalization episodes under risk arrangements each year, its overall investment in value-based care equates to approximately $250 per patient.

> *"Whether episode- or population-based, most new payment models are essentially pay-for-improvement programs that have health systems and physician groups competing against themselves."*

Nonetheless, Sound's investment in value-based hospital medicine has slowly paid off. Its net revenue from the first 4 years of the BPCI cannot be inferred directly from the gross savings rate trends depicted in Figure 1 as it does not account for CMS' discount (2% now 3%) and gainsharing with both hospital and PAC partners. Overall, however, BPCI was revenue-negative for Sound in 2015 and 2016, but profitable thereafter. Beyond the economics associated with BPCI and BPCIA, the core competency and track record in value-based care acquired via those programs has

greatly facilitated Sound's recent expansion into health system ACOs and Medicare Advantage partnerships with payers.

Nonetheless, diminishing returns under current value-based payment models may limit additional investments. Whether episode- or population-based, most new payment models are essentially pay-for-improvement programs that have health systems and physician groups competing against themselves. Success in 1 year implies a higher bar the next, as Sound has appreciated with less favorable target pricing under BPCIA. Although they leverage Sound's previous investments and fixed costs, Sound's ACO and payer partnerships are similarly associated with modest margins.

A Look Ahead

Like all serious participants in value-based payment models, Sound succeeds by reducing someone else's revenue. Primary care physicians succeed under ACOs by reducing admissions and thus hospitals' fee-for-service revenue. Sound and its hospital partners succeed under BPCI by reducing post-discharge utilization and thus the revenue of SNFs and other PAC providers. The net result is winners and losers and clinical care models focusing on a narrow set of spending levers. Effecting more holistic value-based care will require alternative payment programs that reward all parties for success in reducing total costs of care.

Sound also recognizes that voluntary, value-based payment programs, including BPCIA and ACOs, may eventually give way to nonvoluntary models tying reimbursement to total cost-of-care metrics. The net impact of that transition on Sound's economics will of course depend on how those future programs are constructed. Either way, Sound believes its early investment in value-based care will position it to compete effectively in the future marketplace for hospital-based medical services.

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