

The value equation for specialist palliative care: design and delivery principles

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Abstract: The value of specialist palliative care (SPC) is multi-faceted. Patients, families, healthcare providers, health systems and payors all benefit in different ways when SPC is included in the care of those with serious illness; they all have a shared interest in the availability and success of SPC. We propose a new value equation for SPC: SPC services must employ optimal design and standardized delivery of SPC to ensure that the payment model, care model, and needs of the patients are all aligned; and suitable payment models are necessary to provide stable, sustainable resources for the interdisciplinary palliative care teams; when these conditions are met, the cascade of beneficial outcomes of SPC can be produced reliably. We propose a set of 10 design and delivery principles describing these inputs and outcomes, applicable to SPC in all settings—hospital, clinic, and home. Amidst shifts in health policy and financing, the SPC field in the US continues to evolve with new innovations, additional evidence, and a clearer vision of what is valuable. An enduring component of the value equation of SPC continues to be the moderation of the total cost of care for payors. This articulation of the value equation for SPC is based on evidence and experience of palliative care providers and payors in the US, but the framework and principles are likely useful to guide and evaluate SPC in other countries as well.

Keywords: Palliative care; value; outcomes; economics; serious illness

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Introduction

Interdisciplinary palliative care teams provide specialist-level symptom management, goals of care conversations, and serious illness navigation for patients with serious illness and their caregivers in hospitals, offices/clinics, and homes. Since the inception of the field, much work has been done to identify and leverage payments or personnel sufficient to sustain specialist palliative care (SPC) teams capable of producing reliable outcomes. This type of care is focused on providing relief from the symptoms and stress of the illness, with the goal of improving quality of life for

both the patient and the family (1). SPC is concurrent with ongoing, disease-focused care and is not tied to prognosis. In the US, this is distinct from the Medicare Hospice Benefit, which requires a 6-month prognostication window with a care plan focused only on the palliation of symptoms and the discontinuation of disease directed therapies.

Published in 2015, "The Business Case for Palliative Care: Translating Research Into Program Development in the U.S" outlined principles that support the business case for SPC—principles that reflected the state of the field at that time (2). The goal of the 2015 paper was to

Table 1 Original principles of the business case (2)

- 1. Clinical imperative: SPC reduces suffering and distress
- 2. Hospital utilization spikes at EOL
- 3. EOL hospitalizations result in poor financial outcomes even in fee-for-service models
- 4. EOL hospitalizations can also lead to penalties in value-based purchasing
- 5. Community-based SPC can make some hospitalizations unnecessary
- 6. Inpatient SPC can make hospitalizations less costly
- 7. Clinical revenue is insufficient for SPC teams; subsidy needed from entity with aligned interests
- 8. Hospitals see positive "return on investment" with inpatient SPC
- 9. Financial case for community-based SPC is clearest for payors or at-risk providers
- 10. Financial analyses can be done by community health systems not just academic centers

SPC, specialist palliative care; EOL, end-of-life.

articulate and disseminate the core concepts that made SPC financially viable, as a means of encouraging more entities to evaluate the business case to support creating, sustaining, or expanding SPC services. See *Table 1* for a summary of the 10 principles.

In 2015, fee for service (FFS) reimbursement was the dominant payment model for care across settings within the US. This payment model provides no method for compensating an interdisciplinary SPC team that includes professionals unable to bill for individual reimbursement, such as nurses, social workers, and chaplains. Therefore, to provide care that produces expected outcomes using an interdisciplinary team, organizations delivering SPC could not rely on 3rd party revenue to support SPC delivered by these essential disciplines. Due to the financial barriers of the FFS system, SPC offered in ambulatory (outpatient SPC) and community settings were available in a minority of markets, and services that did exist were mostly sponsored by entities that could consider total cost of care (vs. encounter-based costs), such as integrated delivery systems (like Kaiser) or private payors.

The business case for inpatient SPC, which could be made whether the sponsoring entity relied on 3rd party revenue or carried direct fiscal risk for patient care, had been disseminated via several forms of educational and technical assistance (3). Several economic analyses of inpatient SPC had been published and the methods were easily replicable in most health systems, as reflected in the original principles. Since then, the value of inpatient SPC has been validated further in research and in practice (4). According to one recent assessment more than 83%

of hospitals in the US with >50 beds had some form of inpatient SPC in 2020, more than triple the prevalence in 2000 (5).

Reasons for revisions

No compelling evidence has emerged that invalidates the original principles. However, a revision was necessary to address limitations of the original conceptualization and new developments in the field. Our goals for this revision include the following.

More accurate balance of outcomes

Originally, nine of the ten principles described utilization and financial aspects of SPC delivery and effects. This revision devotes three principles to non-financial outcomes and four to implementation and optimization of care delivery.

Moving from competing interests to shared interests

The original principles emphasized the competing interests between clinicians and payors, depicting them as having very different values and interests that are difficult to align. There is still some truth in that, but the distinction between payors and providers in the US is blurring, with payors employing care providers directly, health systems offering health insurance, and medical groups taking on financial risk for cost of care. A shared interests framework is emerging, where various entities work together to achieve the best

care possible, and where payment models do a better job of aligning fiscal and quality incentives for all parties. In 2022, 22% of the 58.6 million Medicare beneficiaries were in Accountable Care Organizations (ACOs) or ACO-like care models, where providers share savings or risk with the Centers for Medicare and Medicaid Services (CMS), the government payer (6).

Recognize the increased availability of Alternative Payment Models (APMs)

Changes in health policy have broadened the availability of payment models that support SPC across settings. These policy and payment innovations make home-based SPC feasible, and this needs to be reflected in the revised principles.

Incorporate developments in community-based palliative care

Recent studies have described innovative SPC programs in ambulatory and home settings, including economic outcomes. A revision can give more attention to these developments.

Emphasize aspects of SPC implementation necessary to produce the outcomes desired

Beneficial outcomes are not necessarily achieved by every intervention labeled "palliative care". For example, several clinical trials have indicated that operationalizing SPC as the bare minimum—such as a single encounter—is a "sub-clinical" dose that does not achieve hypothesized outcomes (7). Similarly, attention must be paid to implementation issues for all parties even after an APM is in place. These lines of evidence call for additional principles that focus on optimal implementation that reliably produces outcomes of interest.

The value of SPC

SPC produces a variety of valuable outcomes which are experienced and perceived differently by patients, caregivers, healthcare providers, and health systems while reducing or moderating the total cost of care for payors. Patients are the primary recipients, and they benefit through prevention and control of symptoms, increased participation in medical decision-making, better navigation of providers and care

settings, lower distress and higher quality of life, as well as care for their spiritual wellbeing. Their family and personal caregivers benefit from proactive communication, education about the sequelae of illness and treatments, navigation supports, and psycho-social care. Their healthcare providers benefit from specialist-level assistance in symptom management, prognostication, and elicitation of care preferences and goals, aligned with the plan for continued disease-focused care. Health systems benefit from more rational and predictable use of acute hospitalizations by those with serious illness, which may positively impact their finances as well as quality or efficiency measures. Payors benefit from all of this being achieved while reducing or at least moderating the total cost of care; the cost of SPC is a mere fraction of the cost of standard treatments for advanced cancer, heart failure, or other palliative-relevant diseases. Clearly, various individuals and organizations can benefit from effective SPC, but what they perceive to be valuable about SPC will differ to the extent their interests differ.

SPC value equation

We propose a succinct equation for achieving the valuable outcomes described above: "Optimal SPC design and implementation, plus appropriate payment model, equals a cascade of beneficial outcomes." This formulation differs from traditional healthcare value equations such as Porter's "outcomes achieved per dollar spent" (8); rather than a ratio, we are depicting two sets of additive inputs that together produce desired outcomes. To fully consider the SPC value equation in context, SPC must be examined alongside payors and other serious illness care providers that all work together in what can be described as an ecosystem for serious illness care (see *Figure 1*).

Design and delivery principles

To provide more detail on how the SPC value equation functions in the real world, we present 10 design and delivery principles that cover implementation, financial arrangements, and the outcomes cascade. These are summarized in *Table 2*.

Positive outcomes depend on minimum competencies and capabilities

The essential elements of quality palliative care have been

The Essential Equation for Specialty Palliative Care

Optimal SPC requires guideline-concordant structures and processes, presence across settings, coordination and collaboration with payors and other providers, and payment arrangements that support longitudinal, team-based care

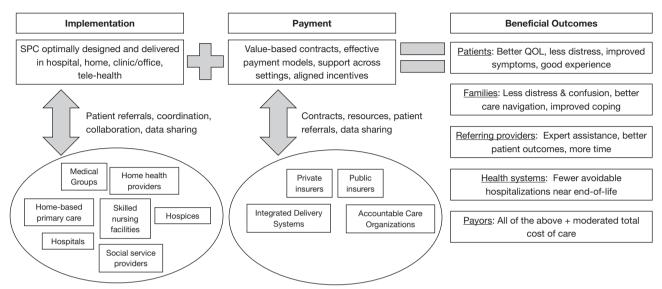


Figure 1 Inputs and outputs of SPC in context of serious illness care and healthcare financing. SPC, specialist palliative care; QOL, quality of life.

Table 2 Design and delivery principles for the SPC value equation

- A) SPC requires careful program design and implementation to balance the clinical inputs, the needs of patients and families, and sustainability considerations
- 1. Positive outcomes depend on minimum competencies and capabilities
- 2. Role clarity and often partnerships are needed to avoid redundancies while addressing the full spectrum of patient and family needs
- 3. SPC services should be tailored to patient needs and preferences, for individuals and specific populations
- 4. Outcomes are enhanced when SPC services are coordinated across settings and providers
- B) Payment models must support the interdisciplinary SPC team while remaining palatable to payors
- 5. Payment model and amount must align with scope and cost of care delivery for the palliative care provider
- 6. Outcomes achieved by SPC need to justify the investment made by the entity that fiscally supports SPC
- 7. Financial incentives must be aligned
- C) When service model and payment model are optimized and aligned, SPC will produce a cascade of beneficial outcomes for a variety of individuals and organizations
- 8. SPC can improve the patient experience of care and clinical/health outcomes
- 9. SPC can improve the experience of those around the patient, including providers and caregivers/family
- 10. SPC can moderate the total cost of care, compared to the alternative

SPC, specialist palliative care.

identified, maintained, and updated through the National Coalition for Hospice and Palliative Care's National Consensus Project Clinical Practice Guidelines (9). Since 2016, national credentialing organizations such as The Joint Commission and Community Health Accreditation Partner have developed SPC credentials and standards for services operating in inpatient (10) or community settings (11,12). These guidelines and standards are based on a growing body of evidence regarding the structures and processes needed to deliver high-quality SPC, including team composition and frequency of visits.

For clinicians, essential competencies for SPC are in communication skills, symptom management, and care coordination (9,13). Experience in teamwork and team-based care are essential to function within an interdisciplinary model. To provide specialty consultation within an inpatient setting, most hospitals require physicians to have specialty level certification. To fulfill the designation of a specialty level palliative care service in other settings, it is generally expected that at least one clinical member of the team be board certified, usually the physician or advanced practice provider (APP). Certification in specialty level care is available to other team members including nurses, social workers, and chaplains.

Organizations that offer SPC must have capabilities that support the functions of team-based care, including meeting spaces and technology to promote communication within the team and across teams. Formal and informal processes for communication are essential. Teams must be able to document findings of a comprehensive needs assessment, determine the acuity of the patient and their caregiver, and develop a shared care plan. Proactive monitoring of patients with serious illnesses, ready access to expertise 24/7, skilled triage staff, and availability for time sensitive visits, either in-person or via video, are also essential. Processes that support shared patient visits that include the patient, family, and additional members of the patient's treatment team are also valuable. These shared visits optimize assessments and shared decision-making for both the family and the care team, encourage intra-professional practice, and are associated with high patient and family satisfaction.

Role clarity and often partnerships are needed to avoid redundancies while addressing the full spectrum of patient and family needs

Role clarity requires clear statement of scope and intent of the SPC service, including eligibility criteria, services that will be provided, provider disciplines and their qualifications, expectations regarding frequency and mode of encounters (in-person vs. virtually), and so on. Clarity across these variables reduces confusion and aligns expectations for all parties (14). Clear role definitions also promote better collaboration between the SPC service and the patient's larger care team. For example, specialty services may continue to provide disease-directed therapies and a payor may continue to deliver support for benefit navigation, but the extended care team, including SPC, will communicate through a central care coordinator, to avoid duplication of services and deliver more efficient care. In cases where multiple case managers are involved in a person's care it is critical to specify roles and responsibilities.

Role clarity within the interdisciplinary SPC model allows for purposeful role blurring such that any team member is capable of screening for unmet needs for the patient and family. Unmet needs outside the area of a team member's expertise are then assessed by those with the necessary training: social work screening for physical distress, physicians and APPs providing the physical symptom management, physicians screening for spiritual distress, chaplaincy providing spiritual assessment and support.

Partnerships are often needed to ensure that patient and family needs, which are often complex and cross medical and social domains, are met without creating misalignment between the scope of SPC services and the amount of payment received. SPC teams can screen broadly for social and practical needs, but addressing those needs requires resources, skills and effort that are beyond most SPC providers. Partnerships with health plans or community-based organizations are often required to address needs such as transportation, behavioral health, caregiver supports, medical meals, housing needs, etc.

SPC services should be tailored to patient needs and preferences, for individuals and specific populations

Most seriously ill individuals would benefit from SPC for a period of months to years. The intensity of support must be dosed to the need, to avoid over- or under-treatment, both of which will negatively impact outcomes. Patients with a predictable care plan and stable symptom control may be seen every 1–2 months in the ambulatory setting. As illnesses progress and functional impairments increase or during symptom exacerbations, visits typically increase in frequency, often requiring home-visits and telehealth so

that patients have the benefit of frequent check-ins without frequent travel. As the illness reaches end-stage, access to the hospice model of care facilitates nursing visits several times a week if indicated.

Effectively serving patients in rural areas often calls for use of telehealth (15), as supply of SPC is often limited in such areas. Even where SPC services are available, extensive drive times for patients can make accessing clinic-based SPC burdensome, and extensive drive time for SPC teams can make delivering home-based care cost prohibitive. Unfortunately, access to broadband and the equipment to facilitate effective video telehealth is not ubiquitous—rural and urban alike may not have access (15). Older people and those with functional disabilities may struggle to use technology. Some organizations have had success with hybrid in-person + telehealth visits, with a nurse or community health worker in the home at the same time an SPC clinical provider connects via video (16).

The SPC care model or training might need to be adjusted to address the specific needs of certain populations. Medicaid beneficiaries often have complex social needs, stemming from poverty, trauma, serious mental illness, or substance use, and SPC teams often benefit from staffing additional social worker support, as well as training in behavioral health and substance use disorders. The inclusion of care team members or outreach workers who share racial, ethnic, or cultural characteristics with the population being served is often valued or preferred patients. To further ensure equitable care delivery, SPC teams and parent organizations should adopt policies and practices aimed at reducing bias and disparities related to pain and symptom management, communication skills, and equitable access to palliative care (17).

Outcomes are enhanced when SPC services are coordinated across settings and providers

SPC can be considered an ongoing, integrated matrix of support for the seriously ill across all care settings and courses of treatment. Multiple studies have demonstrated the effectiveness of SPC across all settings, which allows for the benefit of SPC prior to or following an acute event (18). By ensuring that SPC is available across settings, earlier referral to SPC can occur (19,20), suffering of the person and family can be reduced (18,21), and unnecessary hospitalizations can be avoided (19,20,22). This is a result of ongoing and longitudinal care coordination that is at the core of SPC services.

Seriously ill patients are most vulnerable at times of transitions of care given the complexity of their illness and care plans and the frequent prescribing of high-risk medications such as opioids. Transitions of care occur within care settings, between care settings, and between care providers and must be meticulously coordinated to optimize continuity of treatment plans and support ongoing conversations regarding the evolving goals of care and advance care planning. The latter in particular is not a discrete event but an ongoing conversation that must be revisited as the person's condition changes throughout the disease trajectory. SPC has proven effective in reducing 30-day readmissions through enhanced coordination of care and caregiver support and training (23).

SPC requires the participation of a clinical care manager and trusted medical providers to ensure that the person with serious illness understands their diagnosis, prognosis, and available treatment options. In the most effective models, hospital, ambulatory and home-based teams are linked, formally or informally, sharing resources, including staffing, and communication platforms to enhance collaboration and care transitions. SPC teams with shared communication platforms identify improved communication, coordination, and trust between care teams (24). However, this is less prevalent outside of the hospital or integrated delivery system setting, with resulting barriers to continuity of care.

Payment model and amount must align with scope and cost of care delivery for the palliative care provider

Optimized patient experience, clinical and fiscal outcomes only occur when SPC teams are positioned and supported to identify and address patient and caregiver needs. Teams must have the right disciplines, with the right training, and have the time and tools needed to offer timely, effective care. Payment mechanisms must support the trajectory of care of the seriously ill, including hospital, ambulatory and home-based services as patients with serious illness typically move across settings of care. For provider entities, the scope of service must be aligned with the amount of financial support. The true total cost of delivering a specific set of services needs to be covered by third party revenue or by resources allocated by a parent entity, such as an integrated health system or ACO.

Currently, patchwork models exist to deliver SPC in different settings based on the payment model most prevalent in those settings. In the inpatient and facility setting, SPC providers are reimbursed with a FFS model,

with other team members paid as part of hospital/facility operating expenses. Ambulatory SPC providers are most often reimbursed FFS, with or without other team members who would be paid by a medical group or health system. A minority of payors contract with SPC providers to deliver home-based care, usually using a bundled case-rate payment model. Unfortunately, it is still that case that most home-based SPC is delivered like ambulatory SPC, using home-based FFS reimbursement for providers able to bill individually but leaving unreimbursed the other members of the care team necessary to achieve optimal outcomes. When home-based SPC is supported by FFS only, providers must choose between narrowing the scope of services to align effort with payment—an option that can reduce ability to impact clinical and patient experience outcomes—or delivering guideline-concordant SPC at a financial loss.

Many aspects of care are not reimbursed by any mechanism and fall to the patient/family to financially support—particularly personal caregiving and transportation. There are undocumented costs in serious illness that are substantial and that also drive caregiver burden/burnout and even unnecessary utilization. There is also significant lost income secondary to caregiver demands and thus inability to work outside the home.

The outcomes achieved by SPC need to justify the investment made by the entity that fiscally supports SPC

In the absence of a regulatory mandate that a specific type of SPC must be delivered to a defined population, fiscal sponsors need to see a return on their investment in the form of positive outcomes across multiple domains. Nearly all sponsoring entities will need to see financial outcomes that are cost neutral or better, as compared to usual care.

Health plans, ACOs, integrated delivery systems or medical groups that carry fiscal risk for patients will assess the extent to which SPC reduces the monies paid out on healthcare services. Many will also assess if adoption of SPC justifies the level of investment needed to operationalize such a program; if enrollment is very low, the sponsoring entity may not see a return. These economic outcomes will often need to be accompanied by demonstration of value in other domains, such as improved performance on patient experience measures.

SPC providers, particularly those affiliated with community-based organizations that offer a range of services in addition to palliative care, must be able to demonstrate outcomes to justify the staffing and infrastructure investments made to deliver SPC. In addition to maintaining enough reimbursement to cover the cost of services, providers may also need to demonstrate outcomes related to increased length of stay on service, increased referrals to SPC, and increased patient and family satisfaction scores.

Financial incentives must be aligned

While well-designed and implemented SPC has been shown to reduce costs, which entity benefits from reduced costs varies. The economic implications of reducing inpatient admissions, emergency department (ED) visits, number of medications used, and number of nursing home days often accrue to different stakeholders. An inpatient SPC might offer services that help prevent future hospital admissions, but unless the health system is participating in an APM where they share financial risk, they may experience no financial benefit from this work. Entities that have or share risk for total costs of care are best positioned to benefit from cost reduction, regardless of mechanism for reducing costs or setting in which cost reduction was achieved. For all others, reducing care costs in an active care episode or in the future could have no economic implications or even a discernable negative effect.

The extent to which fiscal incentives for SPC providers and payors are aligned is critical to the scaling and sustainability of SPC. Where APMs such as ACOs are not in place, other mechanisms that create alignment should be used. For example, a payor can provide financial incentives to hospitals that offer inpatient SPC (25).

Avoiding facility admissions can shift financial and other burdens to families and caregivers. This can be difficult for all families, yet the impact is greater on those with the fewest social and financial resources. Programs and benefits that provide personal care aides and that offer practical and emotional support to family caregivers create additional alignment, safeguarding payor economic benefits while promoting patient and family ability to cope.

SPC can improve the patient experience of care and clinical/health outcomes

The true value of SPC comes from its impact on the overall care experience for a person with serious illness. While some definitions of palliative care frame these services as an "extra layer of support", SPC is an essential integrator and organizer of complex care for people with serious

illness. SPC assists the person and family with clinical decision-making through the weighing of available options, considering patient articulated goals and values, and helping navigate the course of serious illness, with an emphasis on optimizing function and physical, psychological, and spiritual well-being.

SPC has been demonstrated to improve the care experience and satisfaction for patients, with numerous examples of ratings in the 90th percentile for likelihood to recommend the services (22,26). SPC has also been shown to improve overall population health, by reducing avoidable admissions and readmissions, and improving care coordination (19,20,22,26,27). These contributions align with the quality outcomes specified in the Centers for Medicare & Medicaid Services Quality Payment Program, including Medicare Advantage Star Ratings and Medicare Incentive Payments (28). Across the trajectory of care, SPC includes focus on improved medication reconciliation, reduced falls, care for older adults, and comprehensive assessments to screen for complexity and social determinants of health.

SPC can improve the experience of those around the patient, including providers and caregivers/family

SPC has been shown to improve outcomes for both the person with serious illness and those who care for them, with demonstrated decreases in anxiety and depression among family caregivers (18). SPC considers a person and their caregivers as the unit of care. SPC quality guidelines stress the assessment of caregiver needs, capacity, and perceived stress as required in the whole person/unit of care assessment (9). Caregiving is associated with an increased risk of death and coronary events, especially if the role is perceived as stressful (29). Hospitalizations and preventable utilization of the ED often stem from caregiver burnout or breakdown (30,31). Supported caregivers are more likely to survive and thrive vs those unsupported by skilled teams (32).

Significant medical advancements have improved prognosis for many previously fatal illnesses such that they are transformed into chronic conditions, often associated with functional impairments with increasing caregiving needs extending over years. Family caregivers are often older, living with chronic illness and frailty themselves. Medical care has increased in complexity, with most seriously ill people having multiple specialty teams involved in their care. In these circumstances, the general practitioner often lacks the infrastructure, skilled

team, and reimbursement mechanism to spend adequate time assessing the multifaceted needs of the patient and caregiver. The coordination of care and integration of care plans from multiple specialists then frequently falls to the patient and caregiver who are afflicted with the illness and its effects. SPC delivers enhanced support for primary care providers if they serve in an ongoing role, to the primary managing service, and to the patient and family. The value of such support is evidenced by improved care coordination, reduced care transitions, and improved medication reconciliation.

SPC can moderate the total cost of care, compared to the alternative

People with serious illness understand that the ED is the trusted resource for crisis-intervention and can be accessed at any time. Many also have a paucity of adequate medical access after-hours within their community. Limited numbers and availability of primary care providers force the triage of people immediately to emergency medical services through the ubiquitous recorded instructions to "hang up and call 911". SPC's proactive approach focuses on anticipating patient needs, educating the person and caregiver on symptom management, and identifying opportunities to mitigate or avoid suffering. Providing access to such supports for patients and families creates a viable alternative to using the ED and acute care hospital to manage chronic progressive illnesses.

By providing SPC, more patient/family goal concordant care can be delivered with the same or fewer resources spent today. The cost of staffing an interdisciplinary SPC has been shown to be equal to or less than the cost of delivering usual care (33). Reduction in costs for those receiving SPC have been found to result from reduced emergency visits, hospitalizations, facility stays, and treatments usually provided to people with serious illness (22,26).

Most economic analyses of serious illness care do not account for waste and duplication of services due to lack of coordination of care, or the costs shouldered by patients and families. SPC care coordination reduces duplication of services and interventions and better aligns services with patient's needs and goals. Clarity regarding goals of care achieves alignment with patient and family goals and often facilitates deprescribing, avoidance of nonbeneficial treatments, and earlier shifts to fully comfort focused plans of care.

The amount of cost reduction realized will depend on

characteristics of the population being served (type of illness, availability of effective treatment options, type of insurance coverage, ability to access available treatments, etc.), timing of engagement with SPC (early or later in the disease course), and environmental variables such as economic or marketplace trends and the healthcare environment.

Discussion

This conceptualization of the value proposition for SPC is intended to be useful for a wide variety of audiences—payors, policy makers, palliative care providers, other healthcare providers, health system executives, evaluators, researchers, and philanthropists among others. This paper is intended to provide a common understanding of SPC's value and essential ingredients, while recognizing that each audience will look at this through a different lens and have different interests and goals regarding serious illness care.

A simple value equation for healthcare has been promoted for decades: quality (outcomes) divided by costs (inputs) (8). That may be attractive for comparative cost-effectiveness studies but falls far short as a useful framework for articulating, producing, and measuring value in the nuanced field of palliative care. Instead, we propose an additive equation for SPC: well-designed, thoughtfully implemented clinical services and an appropriate mechanism for payment (resources) are both necessary to produce desired outcomes.

Several concepts that appear repeatedly in this paper highlight the interdependencies that influence optimal delivery of SPC. "Alignment" is a key concept for handling distinct interests among payors and providers. "Balance" is critical for the difficult work of ensuring that the clinical care model, payment (resources), and needs of patients are all in proportion to one another. "Standardization" (of eligibility criteria and services, for example) is required to ensure that referring providers, payors, and patients all understand what SPC looks like in a given setting or for a given population. "Value" in SPC is multifaceted and will be experienced and perceived differently by patients, family caregivers, referring providers, payors, etc.

California offers a "real-world" example of SPC funding and implementation. In 2014, California legislation declared that Medicaid managed care beneficiaries should have access to palliative care services concurrent with ongoing disease-focused care (34). An astonishing amount of work then had to be done to begin providing communitybased SPC services state-wide in January 2018. First, the state's Department of Health Care Services worked with palliative care providers and the 24 Medicaid managed care health plans to develop standards for eligibility, services, and staffing. Those health plans then worked to develop payment models and contracts with providers. Simultaneously, the California Health Care Foundation, an independent non-profit philanthropy, and other entities funded efforts to train SPC providers, offer technical assistance to providers and the health plans, and to pilottest implementation at one health plan working with four provider groups in a rural part of the state (35). During this time, the health plans did the necessary administrative work to create and manage the new benefit, credential providers, and set up systems to track and monitor services and payments. Concurrently, hospices and other providers established SPC services as a distinct line of business, and uptrained their staff to provide SPC.

Relation to other frameworks regarding healthcare quality and outcomes

Our proposed value equation echoes Donabedian's framework of Structure, Process and Outcomes (36). It is concordant with the Institute of Medicine's six aspects of quality in healthcare (safe, timely, effective, efficient, equitable, and patient-centered) (37). It corresponds closely with the Institute for Healthcare Improvement's (IHI) Triple Aim ("simultaneously improving the health of the population, enhancing the experience and outcomes of the patient, and reducing per capita cost of care for the benefit of communities") (38). IHI recently expanded on this concept and now endorses the Quintuple Aim, which adds improving the work life of health care providers and advancing health equity (39,40). We expand on these two goals further.

Equity

Because it does not involve the inherent trade-offs of the Medicare hospice benefit (prognosis less than 6 months, cease further disease-focused care) SPC may be more conducive to equity. Research on hospice has often revealed differences between White and Black Americans in use of hospice, with Black people enrolling in hospice at a lower rate. Medicare's restrictive requirements for hospice may be impediments to equity for Black Americans who may view healthcare providers as less trustworthy and who may

balk at the premise of giving up one form of care to be eligible for a different form (41,42). The Center to Advance Palliative Care, a palliative care advocacy organization based in the US, has developed an extensive list of policy recommendations that would both ensure delivery of equitable palliative care and position palliative care to some mitigate structural inequities experienced by some populations. Future research on the uptake and impact of such policies and practices would offer additional insight into the role SPC plays in promoting equity for seriously ill individuals, and for marginalized communities (17).

Work-life

The premise that SPC can improve the work-life of other healthcare teams including referring providers has not been thoroughly investigated. We posit that SPC can aid referring providers by delivering specialist level symptom management including safe use of opioids; helping with difficult (and time-consuming) patient and family meetings regarding prognosis, goals of care, and treatment decisions; helping to navigate the use of other forms of care such as home health and hospice; and by improving patients' quality of life and reducing distress. We also posit that through the integrated and interdisciplinary nature of SPC, team members may also benefit from psychosocial support coming from the development and management of a shared care plan, tailored to the skills and competencies of the teams' disciplines.

Implications

Implications for measurement and evaluation

The value equation we propose can serve as a guide for measurement and evaluation of SPC: its structures, processes, and outcomes. Payors can systematically test different kinds of SPC financing mechanisms in different markets to reveal those which function better. Payors can begin to assess SPC using a standard benchmark, allowing for experimentation in use of mandates and incentives to accelerate adoption of the principles described. Health systems can determine the impact on quality-sensitive or payment-sensitive measures of care and begin to expand their value equation to include experience of care for patients, caregivers, and care providers.

Implications for research

These principles can be used as a framework for researchers as they evaluate and compare outcomes from differing models of SPC. In addition, research can explore the premise that SPC will have a positive impact on the work-life of healthcare workers (such as referring providers) and that SPC will be embraced with greater equity by diverse patient populations. Research on dissemination and implementation will be key for the operationalization and delivery of SPC—what are the best ways to achieve alignment and balance of interests in this or similar areas of high-value, low revenue healthcare? Standardization of model elements can also allow for more research into accessibility of services for vulnerable populations and where models of SPC need customization based on the populations served.

Implications for health policy and healthcare financing

It has been demonstrated that certain elements are needed to achieve intended outcomes when delivering SPC. Policymakers can consider mandating the integration of SPC for people with advanced illness and ensuring that model elements are upheld. Policy makers can consider ensuring that clinicians understand the value of SPC as part of Graduate Medical Education. The requirements outlined in the first principle, "Positive outcomes depend on minimum competencies and capabilities", point to the need for sustained focus on education and advocacy. Without an active role in clinical training, the workforce for SPC will not be sufficient to keep up with increasing demand created by the aging of the US population and the need to ensure access to SPC across care settings and geographic regions, for all types of serious illnesses. Medical trainees must be exposed to palliative care, to identify future palliative care providers, to integrate generalist level palliative care competencies into practice, and to encourage appropriate use of SPC among future referring providers. Efforts directed towards trainees in the other core SPC disciplines (nursing, social work, chaplaincy) are also essential. Further, information describing palliative care contributions to all aspects of the quintuple aim, especially economic outcomes, is needed to secure buy-in from health systems and payers who are expected to sustain and sponsor SPC services.

The cost of SPC delivery is clearly a key factor in

the proposed equation, and this should be reported and accounted for when describing economic outcomes for specific services. Public funders such as states and federal leaders can consider emulating the California approach to requiring, funding, and supporting SPC for Medicaid beneficiaries.

Limitations

The primary limitation of this paper is its focus on US healthcare and the current state of SPC within that context. We believe that the core tenets of the value proposition for SPC will be widely generalizable. Researchers can test that hypothesis; empirical studies or syntheses such as this in other countries will demonstrate what is applicable from the US or novel elsewhere.

A second limitation is that the evidence for the original and reformulated principles is not systematically reviewed or rated in terms of bias; it is possible that this paper perpetuates publication bias in the field of SPC. Our intent has not been to provide another systematic review but rather to pull together a wide range of evidence into a coherent framework for understanding what "value" means in SPC.

Finally, our focus was on SPC for adults; design and delivery principles and accompanying economic factors are different for pediatric palliative care and are not addressed in this paper.

Conclusions

SPC, when designed and delivered effectively and financed appropriately, produces a variety of valuable outcomes for patients, families, providers, and health systems. This can be done while moderating or even reducing the total cost of care for payors.

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