

Supporting Patients Through Serious Illness and the End of Life: Sutter Health's AIM Model

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PROGRAM AT A GLANCE

KEY FEATURES: Nurses and social workers in Sutter Health's Advanced Illness Management (AIM) program engage terminally ill patients, elicit and document their goals, and support them as they navigate their physical and emotional challenges.

TARGET POPULATION: Patients who are deemed by their providers to be in the last 12 to 18 months of life, including those who may be eligible for hospice services but not ready to use them.

WHY IT'S IMPORTANT: Even though most people say they want to stay home and avoid stress and discomfort near the end of life, health care interventions tend to increase dramatically during the final months, often producing little benefit and much suffering.

BENEFITS: By honoring patients' wishes and better coordinating care, the program reduces total health care spending by as much as \$9,000 per year, chiefly by reducing acute care use.

CHALLENGES: Knowing what level of care to provide to which patients and for how long, as well as overcoming workforce shortages. Negotiating new payer contracts to cover the unreimbursed expense of the program, which does not pay for itself under fee-for-service reimbursement.

KEY TAKEAWAYS

- ▶ **By proactively managing care for seriously ill patients, Sutter Health's Advanced Illness Management program has produced annual savings of \$8,000 to \$9,000 per patient.**
- ▶ **While the savings from reduced hospitalizations and emergency department care are substantial, many of the program's services are not reimbursable.**
- ▶ **Broader dissemination of the model may require policy and payment changes that reward providers for investments in advanced illness management services.**

INTRODUCTION

In the recent documentary, *Extremis*, filmed in an ICU, a physician caring for extremely ill patients with no hope of recovery helps families understand their options and decide whether to unplug the machines keeping patients' alive. It's wrenching to watch; all the more so because the patients have not communicated their wishes to their families, though one who is semiconscious repeatedly tries to pull out her breathing tube and another attempts, unsuccessfully, to scrawl a note.

Over the past decades, health care professionals — often led by specialists in palliative care — have promoted advance care planning and urged patients to consider it earlier in the course of serious illness. This gives patients, family members, and providers time to overcome their

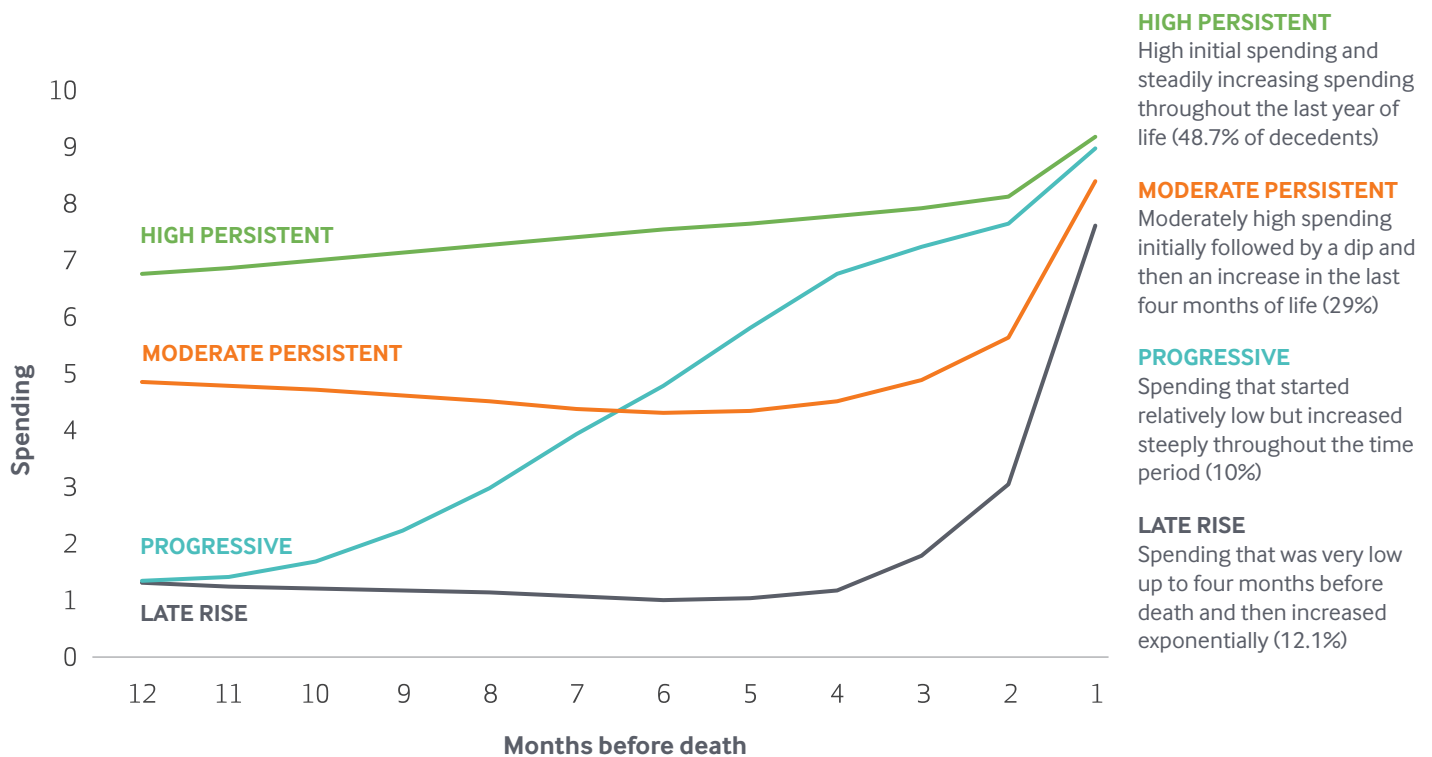
reticence and talk through options when curative treatments no longer work.

This is inherently challenging because the path between a terminal diagnosis and the decision to forgo curative treatment is rarely a straight line. Patients with serious illnesses are often caught in flux. They may have good and bad days, or months, and their needs and goals change accordingly. They also may be struggling to make sense of new symptoms, their disease progression, and their prognosis, or harboring false hope, all of which make it more difficult to reach decisions.

The result can be a startling disconnect between what happens at the end of life and what most people say they want — to stay home with their loved ones and avoid

Health Care Spending Trajectories of Medicare Decedents in the Last Year of Life

With sudden illness, spending accelerates in the last month of life, but is persistently high for patients with chronic diseases who are entering the final year of life. AIM serves both groups.



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stress and discomfort, rather than extend life as long as possible.¹ Instead, as people edge closer to death, they are often subject to a crescendo of medical interventions — surgeries, fourth-round chemotherapies, respirators, and feeding tubes — often with little benefit and much suffering. Seriously ill people who do make use of hospice services often enroll just days before their death.²

“It’s what happens when you don’t focus on the transition from curative care to terminal illness,” says Brad Stuart, M.D., a hospice medical director who helped develop a new approach to managing advanced illness at Sutter Health, a large nonprofit integrated delivery system in Northern California. Known as Advanced Illness Management (AIM), the program relies on nurses and social workers to help patients with terminal conditions and limited prognoses (i.e., those in the last 12 to 18 months of life) navigate their physical and emotional challenges. Stuart and others describe advanced illness management as a “transitional service” for people as they move from intensive curative treatments to end-of-life care. Describing it this way also helps enlist the support of clinicians, who may be wary of referring their patients to palliative and hospice care, which many see as “death care.”

AIM staff coordinate often complex treatment regimens and educate patients and families on recognizing signs of decline and asking for help to avoid complications. The program also places a heavy emphasis on advance care planning to ensure patients’ goals and treatment preferences are elicited as their conditions evolve, which may mean more or less intensive care at the end of life.

Sutter’s experience with AIM demonstrates the financial benefit of proactively managing care for seriously ill patients and honoring their wishes. After accounting for the expense of the program — between \$2,400 to \$2,500 per patient per year — it has produced savings to payers of between \$8,000 and \$9,000 per person annually, principally from reduced hospitalizations and emergency department care during the final months, and particularly the final month, of life.

HISTORY OF ADVANCED ILLNESS MANAGEMENT AT SUTTER

PILOT In 1999 Sutter piloted an approach to improving care for patients with advanced illness who were enrolled in Medicare+Choice plans, a precursor to Medicare Advantage plans. Conducted in the San Francisco Bay Area, the pilot fielded a nurse and social worker to patients’ homes and borrowed concepts from Project RED (Re-Engineered Discharge), a widely used approach to planning and education for patients being discharged from hospitals, and the Chronic Care Model, which encourages proactive management and planning for patients with chronic disease.



EXPANSION In 2009, Sutter extended the program to the Sacramento area using nurses and social workers from the health system’s Care at Home division, which offers home health and hospice services to some 160,000 patients a year. The teams were assigned to support patients with high needs who did not qualify for home health care. The program then served about 550 patients a year.



SCALING ACROSS THE DELIVERY SYSTEM

In 2012 Sutter won a \$13 million grant from the Center for Medicare and Medicaid Innovation, which enabled it to test and expand the model with Medicare beneficiaries in the fee-for-service program. The health system invested an additional \$26 million and used the combined funds to hire and train new staff and adapt the health system’s electronic medical record platform to serve AIM patients. Over the three-year grant period, AIM served nearly 10,000 patients across 19 counties.



This case study focuses on the development and effects of AIM at Sutter, which has more than 5,000 affiliated physicians and 24 hospitals across Northern California. The health system is working to spread its approach to advanced illness care across the organization by training staff in primary care, specialty care, and emergency department and hospital settings to identify and refer patients to the program.

Programs like AIM are preparing for the so-called “gray tsunami:” by 2060, one-quarter of Americans will be 65 or older, up from 15 percent in 2015.³ Given this demographic trend, many more providers — not just those in the palliative care and hospice fields — will need to become proficient in managing advanced illness and comfortable talking about end-of-life options.

THE AIM PROGRAM AT SUTTER HEALTH

Patients Served

AIM currently serves some 2,700 patients a day. Common conditions include heart failure, cancer, chronic obstructive pulmonary disease, end-stage renal disease, and end-stage neural disease. Patients can be referred by providers at Sutter's hospitals; about half enter the program that way. The rest are referred by primary or specialty care physicians or home health and hospice providers. They can be any age and have any type of insurance coverage as long as they are patients of a Sutter-affiliated clinician. When referring, physicians attest that their patients have an irreversible disease and they “would not be surprised if they died in the next 12 months” — language that AIM leaders say is vague enough

Shannon Hartman, one of AIM's social workers, has been visiting once a week with Lon Pray, a 63-year-old retired teacher whose prostate cancer has metastasized to his bones. Two years ago, doctors told Pray he had between 18 months and two years to live. As the clock ticked by, he became obsessed with the amount of time he had left but felt he couldn't open up in a doctor's office.

Pray says Hartman has helped him come to terms with a number of losses — from his physical stamina to his desire to socialize. “I went from going 90 miles an hour, taking care of the house, taking care of rental properties, to the point where I can't do anything,” he says. His conversations with Hartman have helped him understand what's happening to him and communicate with

his wife of 27 years, Lynette, about his concerns about abandoning her. “I don't know where I'd be without this program. It was a godsend,” he says. Lynette agrees. “They let you know what you're going through is normal.”

Hartman says a large part of her job is helping patients work through the same stages of grief that the bereaved contend with: denial, anger, bargaining, depression, and acceptance. “What I see over and over again is that when the patient gets to acceptance, the family follows,” she says. This comes easier to some patients than others.

She works to dispel preconceived notions of what dying will be like. “Some have seen an unpleasant death and think the same will happen to them. I am constantly telling people, it's not going to be your experience.”

In the process she's learned not to make predictions about what patients will want in terms of life-sustaining treatment. “I've seen 107-year-olds who want all resuscitation measures taken. I try to make it clear what that means so people understand it's not like what you see on television. You never stop finding new ways to talk about it.”



In addition to Shannon Hartman, L.C.S.W., Lon Pray meets with Carol Michel, R.N.

to accommodate uncertainty but clear enough to identify appropriate patients.⁴ To be eligible, patients must also meet at least one of the following criteria:

- be deemed hospice appropriate, but not ready to enter hospice (about 30 percent of AIM patients fit this category; for them AIM may serve as a bridge)
- have experienced rapid or significant functional decline
- have experienced nutritional decline, and/or
- have had two or more hospitalizations or emergency department visits in the previous three months.






Program Structure

To engage patients and their caregivers, the program is described as an “extra service” that offers educational tools and round-the-clock access to clinical staff for those with advanced illness. It is housed in Sutter’s Care at Home division, alongside Sutter’s home health and hospice operations. The program draws staff from different parts of the organization and accommodates variation in the type and frequency of contact, from weekly home visits with nurses and social workers to regular phone calls, giving patients a baseline of support and timely responses when help is needed. On average, patients spend about

Stoplight Tools Are Used by AIM Nurses to Help Patients Understand How to Manage Their Conditions and Know When and Whom to Ask for Help

Controlling shortness of breath at home

How do I feel today?

	Green Zone  You are in control.	Yellow Zone   Take action today. Call: _____	Red Zone   Take action now! Call: _____
How is my breathing?	My breathing is normal.	I have trouble breathing while doing the things I want to do. I feel like there is not enough air in the room.	I feel confused or sleepy. I feel like I cannot get enough air. My face, fingers or toes are turning blue.
Is my medicine for shortness of breath helping?	My medicine feels like it is helping.	My medicine does not feel like it is helping as much as it usually does. I am not sure which medicine to take.	My medicine does not feel like it is helping at all. I am not sure what to do now.
If I use oxygen, is it helping?	My normal flow of oxygen is helping.	I feel like I need to turn up (increase) the flow of oxygen to be able to breathe.	My oxygen does not feel like it is helping at all.
Do I feel comfortable?	I feel comfortable.	I am starting to feel uncomfortable.	I feel very uncomfortable. I am starting to feel anxious or afraid.

Developed by the Sutter Center for Integrated Care, 2013.

TRAINING

To prepare staff to provide advanced illness management, Sutter trains all its employees in techniques for engaging patients, including motivational interviewing, which is used to elicit patients' goals and discern underlying motivations. The training also covers techniques of adult learning, such as breaking down information into digestible "chunks" and using teachback to ensure patients and caregivers have mastered instructions.

This approach builds on Sutter's systemwide integrated care management training, which encourages the use of plain language and open-ended questions to counteract clinicians' tendency to rely on medical jargon and checklists.

To help shape what may be confusing or fraught conversations with patients, staff draw on a shared language, including groups of questions for different situations and scripts to break down conversations into different steps that can be taken over time as staff earn patients' trust. "We talk a lot about denial because denial is such an important thing among our patients and families," says Dennis Cox, L.C.S.W., Sutter Care at Home's clinical education manager. "We explore ways to approach denial, and to have respect for that as a psychological defense mechanism, that it's there for a purpose."

Nurse preceptors reinforce initial training by shadowing new staff on home visits to model certain behaviors, such as introducing Physicians' Orders for Life-Sustaining Treatment (POLST) forms, and to provide ongoing oversight and advice.

190 days in the program before moving to hospice (about 50 percent), dying (15 percent), or stabilizing so much that they can be supported through one of Sutter's disease management programs (10 percent). The remainder leave the program for other reasons, including moving out of the service area.

Patients entering the program — either through Sutter's home health division or a referral from a Sutter physician or hospital — receive an initial home visit by nurse or social worker to assess their clinical and social needs, including measuring their nutrition, cognitive ability, emotional state, and level of social support. The nurse and social worker then partner with patients' primary care providers to develop a supportive care plan, make additional home visits (four to six is typical) to check on patients' status, provide education and reinforcement on how to follow the care plan, and offer counseling to discuss concerns.

Most AIM patients are eventually moved to the program's telesupport service, which relies on registered nurses trained in the AIM approach to make regular check-in calls and provide case management services. The telesupport service allows Sutter to achieve efficiencies and sustain the program, given that insurance does not typically cover the costs of ongoing home visits (see section on Financing). A triage nurse is available after hours and on weekends to answer urgent questions. A call to the triage line may prompt a home visit. Patients with greater needs (e.g., those who lack family support) may also receive closer oversight, including additional home visits.

For patients who are eventually enrolled in hospice, the Medicare benefit provides physician and nurse practitioner services, respite care, and spiritual care. Patients who unexpectedly improve may be moved off hospice and back to the AIM program. About 10 percent of patients do so.⁵

Interdisciplinary Team Care

Just as AIM does not make patients dependent on any one part of the program, it does not designate any one staff member as the patients' main care navigator. Instead, an

interdisciplinary team collaborates to help patients with their medical, social, and emotional needs. “There’s no recipe for the right level of support,” says Jim McGregor, M.D., a geriatrician and the program’s medical director.

The program requires close coordination among staff members to ensure patients are receiving the appropriate level of care. To facilitate this, AIM nurses and social workers, their managers, and a nurse practitioner meet in daily huddles to discuss any unexpected events, such as an after-hours call for severe pain or an emergency department visit. Staff then plan and prioritize home visits, calls, and other follow-up steps accordingly. AIM staff members are joined by the medical director, hospital liaisons, and representatives from home health, hospice, and telesupport for biweekly conferences, during which staff members bring forth patient cases for discussion.

A systemwide electronic health record allows AIM staff to communicate with other Sutter clinicians. AIM staff also use a database to review all new patient cases and the status of patients as they move through the program. Having access to real-time data on patients’ progress and being able to track trends across groups enables this work, says Praba Koomson, D.N.P., AIM executive director. “You get all the essential information that you need to plan critically for this patient.”

Honoring Patients’ Wishes

During initial visits, AIM staff introduce Physicians’ Orders for Life-Sustaining Treatment (POLST) forms, which outline what interventions patients would like providers to perform during a medical crisis. Once forms are completed, they review them with patients upon

TEAM ROLES



Telesupport nurses

working from a central location in Utah call patients within 48 hours of handoff, then weekly, then at least twice a month when their symptoms are well managed.

At the request of nurses in the field, they may make additional “tuck-in” calls to check on a patient’s bladder infection, for example.

Frequent contact with a designated nurse “helps people develop confidence in the service and use it,” says Sharyl Kooyer, R.N., an AIM clinical manager. Each nurse supports a panel of about 90 patients.



Nurses

check on patients’ conditions, review any changes, and provide education using 40 “stoplight” tools, each focused on a different condition, medication, or complication. These guidelines help patients and their caregivers recognize when all appears to be well (green light), when to call AIM staff (yellow light), and when to call their primary care doctor (red light).

Social workers

may accompany nurses on initial home visits. They help ensure patients understand their prognosis and talk through their options for end-of-life care.

They may also help patients find sources of support in the community such as Meals on Wheels.



Hospital liaisons

who are registered nurses work at Sutter hospitals to educate patients and providers about the AIM program and make warm handoffs to AIM staff for patients enrolling in the program.

Hospice- and palliative care—certified physicians and nurse practitioners

provide guidance and support to the nurses and social workers. The nurse practitioners make occasional home visits to offer their perspective to patients and communicate with other providers, for example to help determine whether a patient is ready for hospice.

They also make home visits to address symptom exacerbations that might otherwise lead to an emergency department visit or explore why patients continue to experience pain.

SPEAKING A SHARED LANGUAGE

AIM staff use open-ended questions to uncover the nature and cause of patients' suffering and how best to address their needs. For some patients, pain may be physical and for others, existential. The common practice of asking patients to rate their pain on a scale of 1 to 5 does not distinguish between the two.



To open a dialogue with patients about their concerns and goals of care, team members often ask questions like:

- **How are you within yourself?**
- **What questions do you have? I have time.**
- **What outcomes are important to you?**

request or whenever patients' conditions change or they move to a different part of the program. McGregor says carving out this time for these discussions is important. Primary care and other physicians may be reluctant to broach the subject of advance directives because "if you have 15 minutes in an office visit you're afraid to start a conversation that may take longer." In the absence of a POLST form, if a patient with any kind of advanced illness shows up in the hospital, "physicians automatically go into treat mode and ask questions later," he says.

Nearly all AIM enrollees (97%) complete advance care planning documents within 30 days of enrollment. Sutter has found two-thirds modify them one or more times while enrolled in the program, demonstrating the importance of maintaining an ongoing dialogue about patients' goals and preferences.

In about half of AIM cases, family members disagree about what course of treatment to pursue. When this occurs, social workers facilitate group conversations and make sure the patients' views are heard.⁶

RESULTS

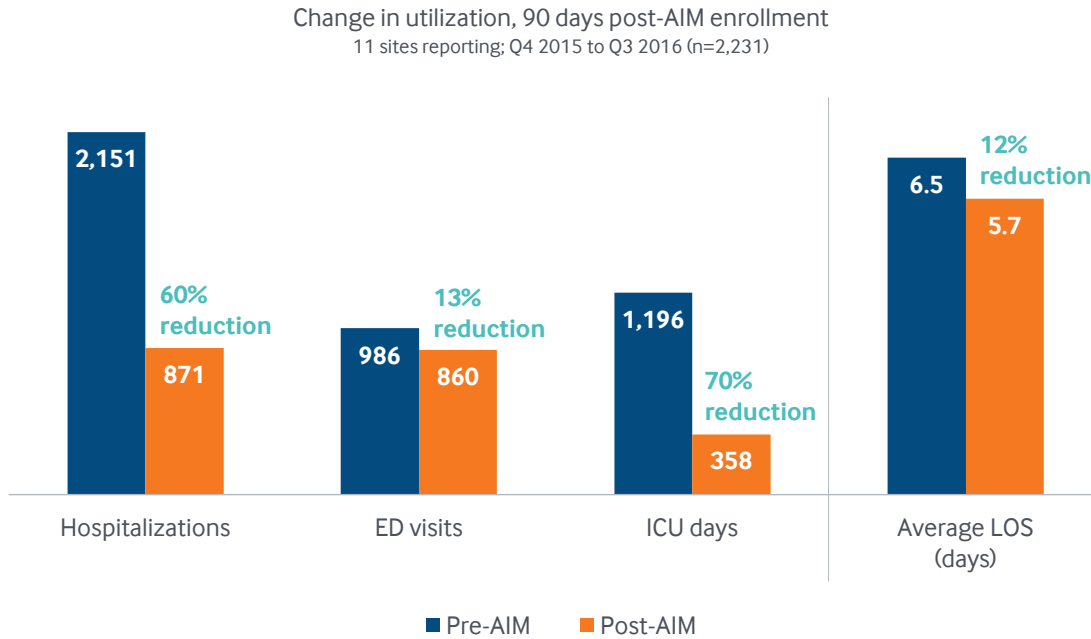
According to Sutter, patients in the AIM program spend fewer days in the hospital in the last three months of life relative to the most recently available national benchmarks (7.3 days in 2016 vs. 8.2 days nationally in 2009) and make less use of intensive care units (9.2% of patients were admitted to the ICU in the last 30 days

of life in 2016 vs. 29.2% nationally in 2009).⁷ They are also less likely to die in the hospital (8.8% in 2016 vs. 37% nationally in 2015).⁸ While transfers to hospice and deaths in hospice are on par with national averages, AIM patients are admitted to hospice earlier, with a median length of stay of 26 days in 2016 vs. 23 nationally in 2015.⁹ Patients give the AIM program high marks, with more than 80 percent responding positively to survey questions about care coordination and communication, symptom management, and knowing their rights and responsibilities.

Sutter also measured utilization of hospital care in the 90 days before and after enrollment in the program. Reviewing care for 2,231 Medicare patients, Sutter saw dramatic declines, including a 60 percent reduction in hospitalizations, a 13 percent decline in emergency department visits, a 70 percent reduction in ICU days, and a 12 percent reduction in the average length of stay.

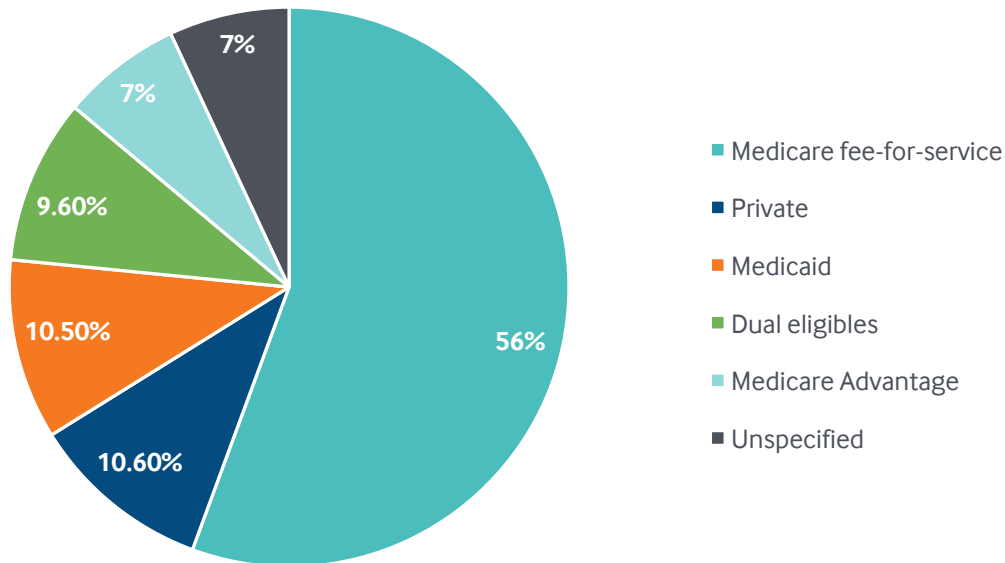
While Sutter's financial analysis of the program shows the program reduces total health care expenditures by as much as \$9,000 over the course of a year, much of the savings are concentrated in the last month of life, when the intensity of medical care might otherwise escalate. One analysis found the program reduced the total cost of care per beneficiary by almost \$5,000 in the last 30 days of life, which the researchers said was likely attributable to reduced hospitalizations and emergency department visits.¹⁰

Acute Care Use, Before and After Enrollment in AIM



Note: ED = emergency department; ICU = intensive care unit; LOS = length of stay.
Data: Sutter Health.

Sources of Insurance Coverage for AIM Patients



Notes: Private includes Sutter's own health plan. Segments may not sum to 100 percent because of rounding.
Data: Sutter Health, as of late 2016.

FINANCING

Sutter allocates roughly \$12 million each year to pay for the staff and other resources needed to operate the AIM program, which translates to a per-enrollee cost of \$12.53 per day. This investment is necessary because the work of telesupport nurses, as well as most home visits by nurses and social workers, is not reimbursed under fee-for-service contracts with public and private insurers.¹¹

The program produces dramatic savings for payers, primarily by reducing hospital and emergency department use. In a recent 12-month period, the AIM program was associated with a reduction of \$24.4 million in billed charges (\$10,953 per AIM enrollee), mainly as a result of fewer hospital admissions. Sutter's decline in revenue from hospital and emergency department use was partially offset by indirect savings — \$14.4 million in the year ending September 30, 2016, or \$6,476 per enrollee — which was achieved in part by reducing length of stay for patients who were hospitalized.¹² AIM also generated revenue by facilitating earlier admission to Sutter's hospice program.

Sutter's strategy for reducing its outlay for the program is to pursue managed care contracts and accountable care arrangements that allow it to recover or share in the savings to payers that result from reduced hospital utilization. As of 2017, about 20 percent of Sutter's revenue came from capitated or value-based contracts. That share will likely increase as the delivery system adds members to its health plan and assumes risk for more Medicare Advantage patients. "It's a strategic advantage as we move into value-based arrangements that we have this type of program ready, willing, and able to meet the needs of patients," says Elizabeth Mahler, M.D., Sutter Health's vice president of clinical transformation. Sutter's leaders estimate that the transition to value-based payment will cover the direct costs of the AIM program (not accounting for indirect savings it produces) when about 35 percent of participating patients are enrolled in capitated payment arrangements.

Sutter has already entered into one accountable care arrangement with a commercial insurer to serve this population — one that offers shared savings for reducing

ICU days and unnecessary hospital admissions and provides a per-member per-month fee to cover the program's infrastructure. Based in part on Sutter's experience, the Coalition to Transform Advanced Care has proposed an alternative payment model to the Centers for Medicare and Medicaid Services (CMS) to pay for advanced care management that would combine a \$400 per-member per-month fee with opportunity for shared savings, though AIM's leaders say the proposed monthly fee may be too low to cover its upfront investment.¹³

LESSONS

Knowing what level of care to provide to which patients and for how long are keys to effective and efficient advanced illness management. AIM's leaders say that to make judicious use of resources under current reimbursement, they've had to figure out how to deploy their services in ways that benefit the greatest numbers of very sick patients — an effort that's facilitated by their panel management tools and flexible, responsive model of care. Leaders hope to use predictive analysis to identify patients who would benefit from AIM services, making the program less dependent on physician and home health referrals. At the same time, they want to gauge whether patients who remain in the program for longer than a year still need this level of care or would be better served by less expensive complex care management programs. They also seek opportunities to increase the efficiency of care. Centralizing care management support, which Sutter did in October 2016 after testing various models, enabled the system to achieve efficiencies (nurses' salaries are lower in Utah than in California), while also allowing for tighter quality control, according to Lori Bishop, M.H.A., R.N., AIM's former chief executive.

Workforce changes may be needed to meet the demand for advanced illness care. Expanding advanced illness management at Sutter is constrained by challenges in recruiting nurses, social workers, and others. "In smaller communities, we hit a saturation point in hiring," says Kooyer. To help meet demand, AIM's leaders may more frequently send nurse practitioners to visit patients; this could also increase reimbursements since these providers are able to bill for their services.

Sutter may also add lay workers to its workforce. “We’re looking at using community health workers both within telephonic case management and as boots on the ground in the home to complement our interdisciplinary care team,” says Monique Reese, D.N.P., Sutter Care at Home’s chief clinical executive.¹⁴ Replacing some home visits with virtual visits may be another way to scale the program in order to offer services to more people who need them, she says.

Clinicians must be prepared and willing to engage patients in conversations about end-of-life care.

Sutter estimates that AIM could benefit roughly 5 percent of the delivery system’s patient population. Because there is far greater demand for AIM services than the program can meet, program leaders say that all health system providers need to understand how to elicit patients’ preferences and broach conversations about end-of-life care. “We’re taking our AIM principles and empowering our colleagues to do some of this themselves because there’s no way we can do it all with a specialty,” says Bishop. AIM’s leaders say their work has already changed the broader clinical culture at Sutter, with more physicians now willing to refer to their program. “I think that’s probably one of the strongest effects we’ve seen. They value the ability to refer to this program to help their patients,” says Jeff Burnich, M.D., senior vice president of medical and market networks.

Policy and payment changes will be needed to spread this approach. Many health care regulations, clinical guidelines, and quality measurement practices are built around curative treatment and the expectation it will lead to improved health outcomes. This can induce behavior that runs counter to patients’ interests. For example, the Outcome and Assessment Information Set — the survey CMS uses to monitor the quality of home health care — tracks and rewards improvement in patients’ functioning. But most advanced illness patients aren’t going to improve. An effort led by the National Committee for Quality Assurance to create new measures assessing the quality of serious illness care may facilitate policy change; such measures could encourage assessing quality from patients’ point of view.¹⁵



Our patients emotionally are right in the middle of it all. They’re struggling, they’re probably on an aggressive plan, but maybe it’s not working for them, and they’re trying to figure out what to do.

Dennis Cox, a social worker who leads AIM’s clinical education programs

Although Sutter has been able to sustain AIM by subsidizing it with profits made through other services, it has done so in anticipation that the program will help it move from fee-for-service to value-based payment. Opportunities for health systems to replicate Sutter’s approach may depend on the degree to which they can use value-based payment arrangements to recoup their investment by, for instance, sharing in the savings from reducing hospital use and shifting care to home- and community-based settings. The Coalition to Transform Advanced Care and the American Academy of Hospice and Palliative Medicine have proposed alternative payment models for adoption by Medicare under the federal government’s new MACRA Quality Payment Program framework.¹⁶

The payoff to society will come in tangible and intangible ways, AIM’s developers insist. “It’s almost a spiritual thing, where you’re doing the right thing, and lo and behold, you can create financial savings by doing the thing that we all went into this business to do, and that’s not just caring. It’s healing,” Stuart says.

NOTES

- ¹ L. Hamel, B. Wu, and M. Brodie, *Views and Experiences with End-of-Life Medical Care in Japan, Italy, the United States, and Brazil: A Cross-Country Survey* (Henry J. Kaiser Family Foundation, April 2017).
- ² While more patients are receiving hospice care and dying at home, this tends to happen only after increasingly intensive interventions. ICU use among Medicare beneficiaries during the final months of life increased from 24 percent to 26 percent between 2000 and 2009, while the number of very short hospice stays (fewer than three days) rose from 4.6 percent to 9.8 percent. See J. Teno, P. L. Gozalo, J. P. W. Bynum et al., "Change in End-of-Life Care for Medicare Beneficiaries: Site of Death, Place of Care, and Health Care Transitions in 2000, 2005, and 2009," *Journal of the American Medical Association*, Feb. 6, 2013 309(5):470–77.
- ³ U.S. Census Bureau, *Profile America Facts for Features — Older Americans Month, May 2017*, CB17-FF.08 (U.S. Department of Commerce, March 27, 2017).
- ⁴ For more information on the effectiveness of the "Surprise Question," which has been used as a screening tool in the U.S. and the U.K., see N. White, N. Kupeli, V. Vickerstaff et al., "How Accurate Is the 'Surprise Question' at Identifying Patients at the End of Life? A Systematic Review and Meta-Analysis," *BMC Medicine*, Aug. 2, 2017 15:139.
- ⁵ Nationally, about 20 percent of patients are discharged from hospice. See I. Jaffe, "Nearly 1 in 5 Hospice Patients Discharged While Still Alive," *Health, Inc.*, National Public Radio, Aug. 11, 2017.
- ⁶ When conflicts arise, AIM staff defer to the patient's wishes or those of his or her designated proxy.
- ⁷ J. Teno, P. L. Gozalo, J. P. W. Bynum et al., "Change in End-of-Life Care for Medicare Beneficiaries: Site of Death, Place of Care, and Health Care Transitions in 2000, 2005, and 2009," *Journal of the American Medical Association*, Feb. 6, 2013 309(5):470–77.
- ⁸ M. D. Aldridge and E. H. Bradley, "Epidemiology and Patterns of Care at the End of Life: Rising Complexity, Shifts in Care Patterns and Sites of Death," *Health Affairs*, July 2017 36(7):1175–83.
- ⁹ National Hospice and Palliative Care Organization, *Facts and Figures: Hospice Care in America* (NHPCO, Oct. 2017).
- ¹⁰ NORC, *HCIA Complex/High-Risk Patient Targeting: Third Annual Report Addendum* (NORC at the University of Chicago, April 2017).
- ¹¹ Sutter Health's ability to subsidize the AIM program under fee-for-service reimbursement may be related to its competitive market position. A study of hospital pricing in California found that Sutter Health and Dignity Health, the two largest multihospital systems in California, received \$4,000 more in reimbursement per admission from a major insurer than did other hospitals in California in 2013; see G. A. Melnick and K. Fonkych, "Hospital Prices Increase in California, Especially Among Hospitals in the Largest Multi-Hospital Systems," *Inquiry*, June 9, 2016 53:1–7. Separately, Sutter is the subject of an antitrust lawsuit in which employers and labor unions have accused the health system of abusing its market power to charge inflated prices; see C. Terhune, "Health Giant Sutter Destroys Evidence in Crucial Antitrust Case Over High Prices," *Kaiser Health News*, Nov. 17, 2017.
- ¹² The cost savings are realized in part by reducing the length of hospital stays for Medicare patients, who bring less revenue than do privately insured patients.
- ¹³ Sutter is also considering a contract with Partnership Health Plan, a private insurer, that would pay AIM a larger per-member fee for the first 14 days one of their members is enrolled to account for the additional assessments needed during this time. The contract also would provide bonuses to reward Sutter for taking part in public quality reporting and for achieving benchmark performance levels related to decreasing utilization of the emergency department.

- ¹⁴ AIM's leaders are studying Minnesota-based Allina Health's use of community health workers to support patients with advanced illness, which has been shown to improve patient and caregiver experiences, reduce total costs of care, and increase use of hospice and inpatient palliative care. See K. Krypel and M. Hutchison, "GrantWatch: How Lay Health Care Workers Can Add High Touch to High Tech," *Health Affairs Blog*, June 11, 2015.
- ¹⁵ See National Committee for Quality Assurance, "NCQA's Serious Illness Care Measures Project Awarded: \$2.2 Million Grant from the Gordon and Betty Moore Foundation," News release (NCQA, July 17, 2017).
- ¹⁶ Coalition to Transform Advanced Care, *Advanced Care Model (ACM) Service Delivery and Advanced Alternative Payment Model*, Submitted to the Physician-Focused Payment Model Technical Advisory Committee, Oct. 4, 2017; and American Academy of Hospice and Palliative Medicine, *Patient and Caregiver Support for Serious Illness*, Submitted to the Physician-Focused Payment Model Technical Advisory Committee, Aug. 15, 2017. For background on the MACRA Quality Payment Program, see Centers for Medicare and Medicaid Services, *What's MACRA?* (CMS, n.d.).

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