FCA | VENTURE PARTNERS

Investment Area of Interest:

End-of-Life and Palliative Care

July 2018

Executive Summary

End-of-life care is an important part of the care continuum for patients and the families of patients with terminal conditions or those encroaching upon old age. Palliative care is one option for end-of-life care and is specifically focused on symptom and pain management for patients with serious illnesses; it is not necessarily limited to patients in their last days or months of life and can be administered across a variety of care settings (from home to hospital).
In the U.S. healthcare system, a majority of end-of-life care and its associated costs have traditionally been driven by hospital stays and medical interventions, often involving high-technology and aggressive surgical or pharmacological therapies. Research suggests that this is due in large part to the lack of conversations and alternative resources to help patients, caregivers, and healthcare providers navigate this difficult time. Entrepreneurs are answering this "call-to-action" with a variety of new businesses focused on improving end-of-life care and expanding access and knowledge about palliative care options. Companies in this space have emerged in the past decade, showing promise and early success with family- and patient-friendly services that have helped reduce healthcare costs and improve quality-of-life. Many of these start-ups have taken on a patient-centered approach to care, such as by increasing access and convenience of health care services or by providing platforms to have conversations about patient's wishes, leading to an increase in patient education, autonomy, and dignity.

Innovations in end-of life care target common problems with unique solutions such as:

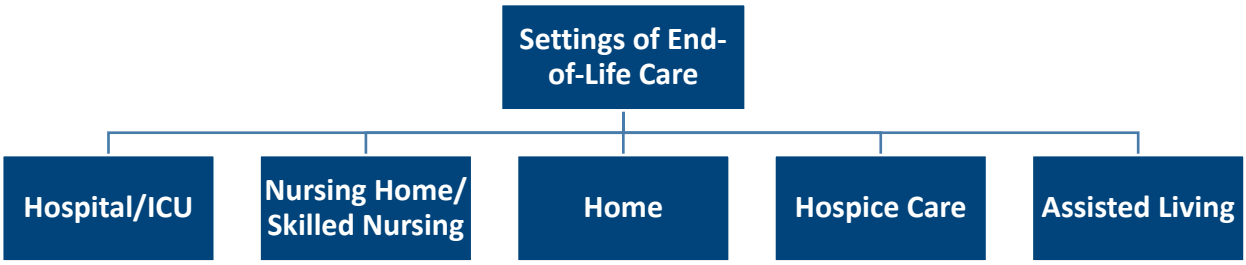
- In-home or telemedicine palliative care delivery platforms
- Digitized end-of-life documentation
- Predictive analytics to triage patients to hospice
- Physician-driven post-acute care management
- Advanced-care planning using behavioral science

These companies proactively engage patients with serious illnesses or nearing end-of-life to increase their education, awareness, and access to resources. This report examines the burden of end-of-life care on the U.S. healthcare system, challenges with traditional care, and some of the startups working to improve the way end-of-life and palliative care are being delivered and reframe the culture surrounding it.

Defining End-of-Life and Palliative Care

End-of-life care refers to the support and medical care given to individuals in the time surrounding death, which can range from days to months as individuals may be living with multiple chronic conditions and disabilities[1]. End-of-life care is a broad term that refers to care given to a patient in the last period of his/her life; it can take place in a variety of settings where treatments and/or supportive care can be administered. Some end-of-life care modalities like palliative and hospice care prioritize patient comfort, symptom relief, and pain management. However, in the U.S. healthcare system, most costs of end-of-life care stem from medical treatments like inpatient hospital care, surgical interventions, and expensive drug therapies. These types of aggressive regimens play an important role in treating sick populations, but may result in more harm than benefit for many. Though advanced medical care and extreme measures like life support can increase the length of time of a patient's life, they often do so at the expense of quality-of-life, especially for patients with terminal illnesses and those of very advanced age.

Palliative care is a treatment option for patients with serious illnesses, and need not necessarily be for those with terminal conditions at the end of their lives. In addition, palliative care may be administered alongside other types of care including aggressive treatment regimens or surgeries. Palliative care may be administered across a variety of care settings, include all of the end-of-life settings mentioned below.



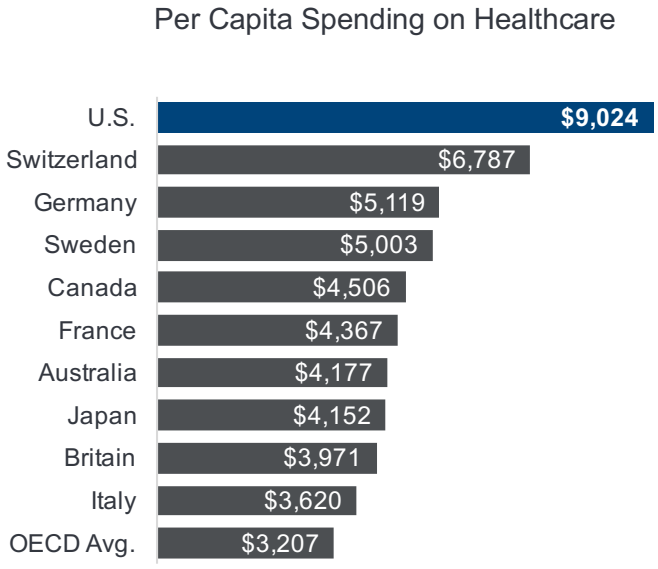
End-of-Life and Palliative Care in the Era of Value-Based Care

The U.S. healthcare system has begun to shift more towards compensating healthcare organizations and providers for the "value" of care provided, which is measured by cost relative to quality and outcomes. This is in contrast to purely providing payment for services rendered, which is how the more traditional "fee-for-service" model works. This shift, in combination with

increases in access to information and patient empowerment, have helped shape the way end-of-life care is approached and administered in the context of the health system. These changes have manifested in the form of successful companies tackling end-of-life issues, now able to receive payment from health insurers for their services, as well as in the form of changes in government policies. For example, until 2016, there was no law or reimbursement provision in place to encourage or compensate healthcare providers to have discussions with patients about end-of-life and planning. However, as of January 1, 2016, Medicare began to cover advanced care planning meetings between their beneficiaries and health professionals[2]. Palliative care has also been described to be at the "heart" of value-based care, with several companies and voices in healthcare including IBM, Kaiser, and Health Decisions Group, deeming it to be of increased importance in this era[3,4]. As this shift continues, the way end-of-life and palliative care is approached will continue to evolve, making companies in this space all the more exciting and full of financial and value potential to the healthcare system.

Disproportional Spending on End-of-Life Care

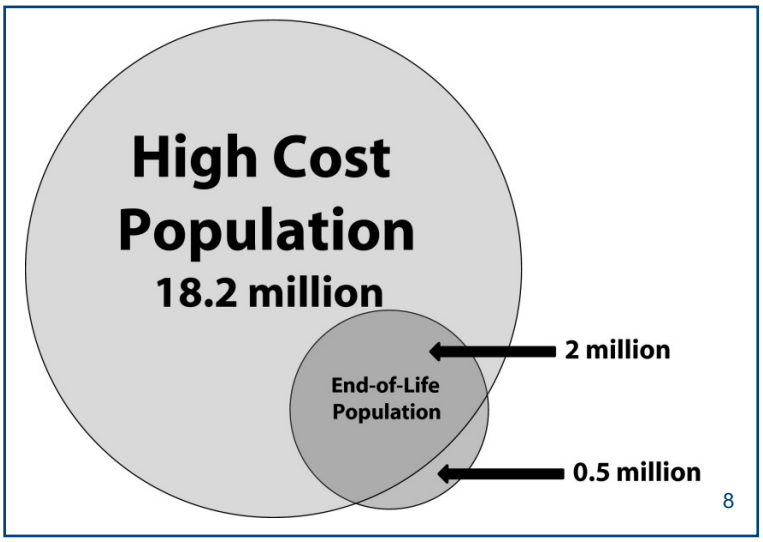
Healthcare spending in the U.S. is on the rise and is significantly higher than that of other industrialized countries. In fact, 18% of the U.S. GDP is spent on healthcare; in contrast other OECD nations spend on average 9% of their GDPs on healthcare[5]. To put the magnitude of spending in perspective, the U.S. healthcare industry is financially larger than all but the economies of four countries in the world.



It is known that spending on healthcare is not equally distributed amongst the population. Rather, the high costs are largely driven by the sickest individuals and offset by the majority. In 2016, the U.S. spent $3.4 trillion dollars of total medical costs, according to the federal government.[6] Of that, 50% of these costs are estimated to be driven by the sickest 5% of the population[6]. Thus, by improving the care and reducing costs for the sickest individuals, there is great potential to reduce healthcare expenditures. End-of-life care is a major contributor to this

high spending, placing a great deal of "financial stress" on the healthcare system, especially the "Medicare budget."[5] Medicare, which spent approximately $554 billion in 2011, spends 28% (approximately $170 billion) on patients during their last six months of life[5]. Furthermore, end-of-life care is estimated to account for between 10-20% of total U.S. healthcare spending[7,8]. One study estimates that "of the $1627 billion spent on health care services in 2011, $205 billion (13%) was spent entirely on individuals in their last year of life. Experts conclude palliative care comprises a small portion of total spending on end-of-life care.

The "sickest 5%" of patients include much more than patients at the end of their lives, such as patients with persistently high costs (i.e. due to chronic conditions) and patients with a discrete high cost event (i.e. due to an accident or acute healthcare event such as a heart attack). However, more than three fourths of patients at the end of life are part of the high cost population. Of the 2.5 million individuals approximated by one study to be at the last year of life in 2011, 2.0 million (80%) were dubbed to be a high cost population[8].



There are plentiful reasons why patients nearing the end of their lives, and often living with terminal conditions, are high cost to the system. Among those, major contributors include the high costs of some centers of care for these populations – such as skilled nursing facilities and hospitals – as well as the costs of treatment for those who pursue regimens other than or in addition to palliative care. Of these costs, hospice accounts for a "relatively small part of Medicare/Medicaid payments."[9] Meanwhile, hospital inpatient charges are close to $7,000 per day, and ICU costs are upwards of $10,000 per day. Skilled nursing facilities are reimbursed by Medicare for $622 per day.[9]

> **"**The existing data suggest that **hospice and advance directives can save between 25-40% of health care costs** during the last month of life."
>
> -EJ Emanuel
>
> Published in the Journal of the American Medical Association (JAMA)

Data on the costs of hospice and palliative care have shown these types of care to be "high quality end-of-life care" options.[10] Furthermore, they have been shown to be relatively inexpensive due to low start-up investments for facilities and also helpful with reducing impact on resource utilization of more expensive procedures or medical stays, such as those at the ICU.[11] Overall, access to palliative care and hospice centers has expanded in recent years, but lack of access for many patients is still a potential roadblock toward improving patient options and reducing the cost of care at the end-of-life.

Hospice, palliative care, and other high-quality, lower cost treatment options for patients at the end-of-life, especially those with terminal and painful medical conditions can be very beneficial to both patients and the healthcare system as a whole. Experts have concluded in leading medical journals that advance directives, the conversations surrounding creating plans about end-of-life, and hospice care should be encouraged to patients because "they certainly do not cost more and they provide a means for patients to exercise their autonomy over end-of-life decisions".[7,8]

Increasing Relevance of End-of-Life and Palliative Care

End-of-life care and the need for palliative care have become increasingly important and relevant topics as our population continues to age and develop more chronic conditions requiring complex treatment regimens and as there are increases in life expectancy and availability of cutting edge technologies and treatment options.

In most decades of the 1900s, leading causes of death were more often due to infections, accidents, and acute illnesses that resulted in relatively quick deaths. However, today, the top three causes of death are heart disease, cancer, and chronic lung disease[12]. Also making the top ten list of major causes of death are stroke, Alzheimer's, and diabetes. These are major chronic conditions that need extensive treatment and often result in slow and painful demise of patient health and quality of life. Since the U.S. population is continuing to age and continuing to accrue chronic conditions, discussions about approaching end-of-life care, which is also evolving to become more complex and expensive, are becoming even more relevant.

Projections for 2000 to 2050 have the senior population growing 135% and the 85 and older population increasing by over 350%[13], with patients in the last year of their lives likely suffering from one or a multitude of expensive, painful, and often untreatable chronic illnesses.

> "Advances in U.S. Medical Care Bring *Too* Much of a Good Thing.
>
> Dialysis, intensive care units, organ transplantation, cardiovascular procedures, and medications are **indefinitely extending the lives of very sick people who are never going to get well**."
>
> - The Medicare News Group, 2013

Along with the increases in age and difficult to treat conditions, there has also been an increase in technologies and treatments that can increase longevity and help care for patients with medical ailments. For instance, there are more options for surgical interventions with the invention of minimally invasive and robotic-aided procedures. New devices have allowed resection of tumors that were previously inoperable and have helped support heart and lung function in the context of disease. Many new medications for the treatment of cancer, heart disease, respiratory illnesses, and neurologic conditions have also been introduced into market. Some of these surgeries and therapies are life-saving. Others may extend life for patients in the magnitude of a few days to a few weeks. Many come with serious side effects or potential complications. Major advances have also occurred in technology that can prolong the length of life – such as life support machines and critical care units – which can perform bodily functions for patients including heating the body, breathing for and pumping the heart, feeding, and more. Still, these life saving measures only go so far. A mere 6% of cancer patients receiving CPR get well enough to ever leave the hospital, according to one 2006 study[15]. Feeding tubes can lead to serious, antibiotic resistant infections and do "little to prolong life in the elderly."[15] Breathing tubes majorly detract from quality of life, with patients who receive breathing tubes often requiring restraints and sedatives to prevent them from pulling out the tubes.[15]

Though this increase in technology has brought much benefit to many, it is not necessarily always the best solution. More treatment is not always better care, and research has found that individuals who elect for more treatment may do so primarily due to a lack of information and education about the illness, what the treatment entails, and what the likely outcomes are[14].

> "Overall, **69%** of patients with [stage IV metastatic] lung cancer and **81%** of those with [stage IV metastatic] colorectal cancer **did not report understanding that chemotherapy was not at all likely to cure their cancer**"[15]
>
> - Weeks, J. et al in the *New England Journal of Medicine*

A lack of patient education undermines the ability of patients to make informed treatment decisions that are in line with their preferences.[15] When patients are educated about treatment options – as is the case in one study involving 101 elderly nursing-home residents – they more often choose comfort care over life-prolonging care. In the aforementioned study, nursing-home patients were shown a video of attempted CPR and a video of less aggressive treatment; after watching the videos, the residents chose between three options: life-prolonging care, limited curative efforts with comfort care, or just comfort care. 80% chose comfort care. In another arm of the study, residents were given only verbal descriptions of the care and were presented the same options; in this group, a lesser 57% preferred comfort care.

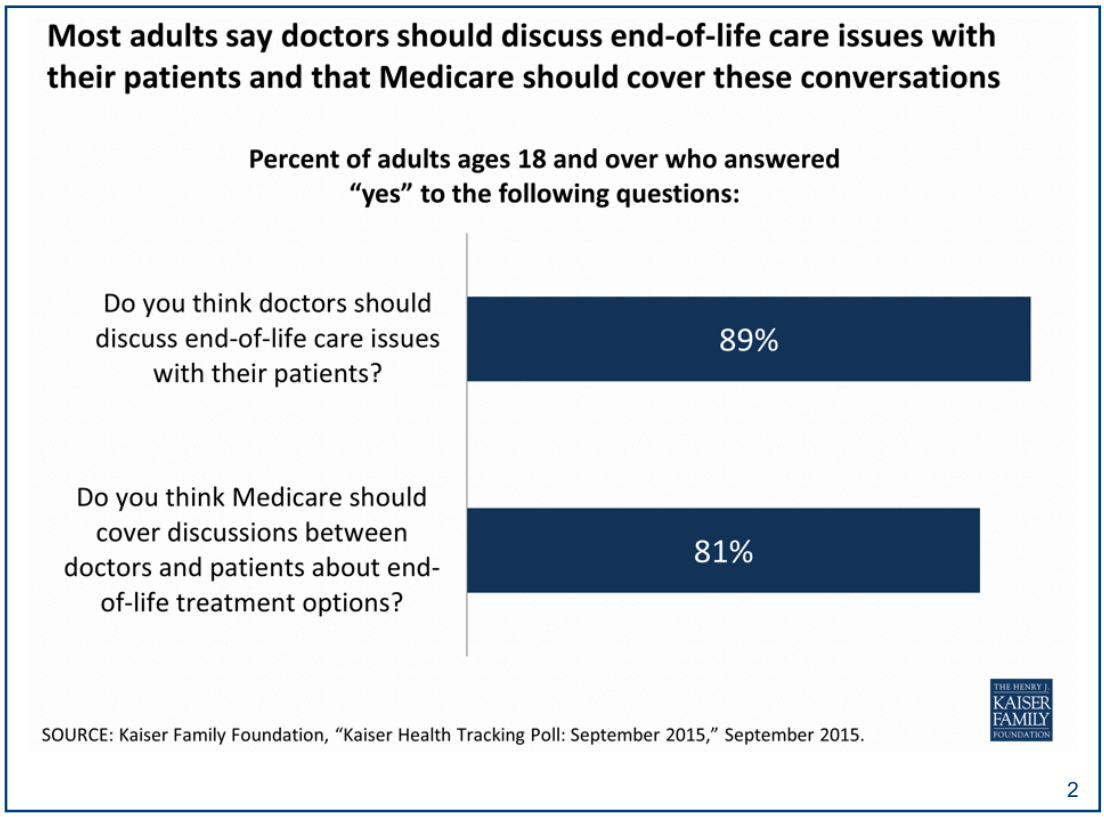
Another illustrative example of how a familiarity with medical outcomes and what treatment options entail impacts treatment choices is how doctors largely choose to approach end-of-life care. More than 88% of physicians surveyed in a Stanford University study published in PLOS ONE said they would forgo resuscitative treatment.[16] A famous 2011 paper entitled "How Doctors Die" by Dr. Ken Murray discusses how doctors do not choose to die like the majority of the public, and several other discussions have been published on some of the reasons why. The most popular cited reasons are familiarity with the "futility" of many end of life care efforts and not wanting to be inflicted with the pain and suffering of many late stage treatments and life prolonging measures.[17,18] Instead, it appears, trained medical professionals seek having "better final days" and erring on the side of preserving quality over quantity.

Controversy and the Culture of Silence

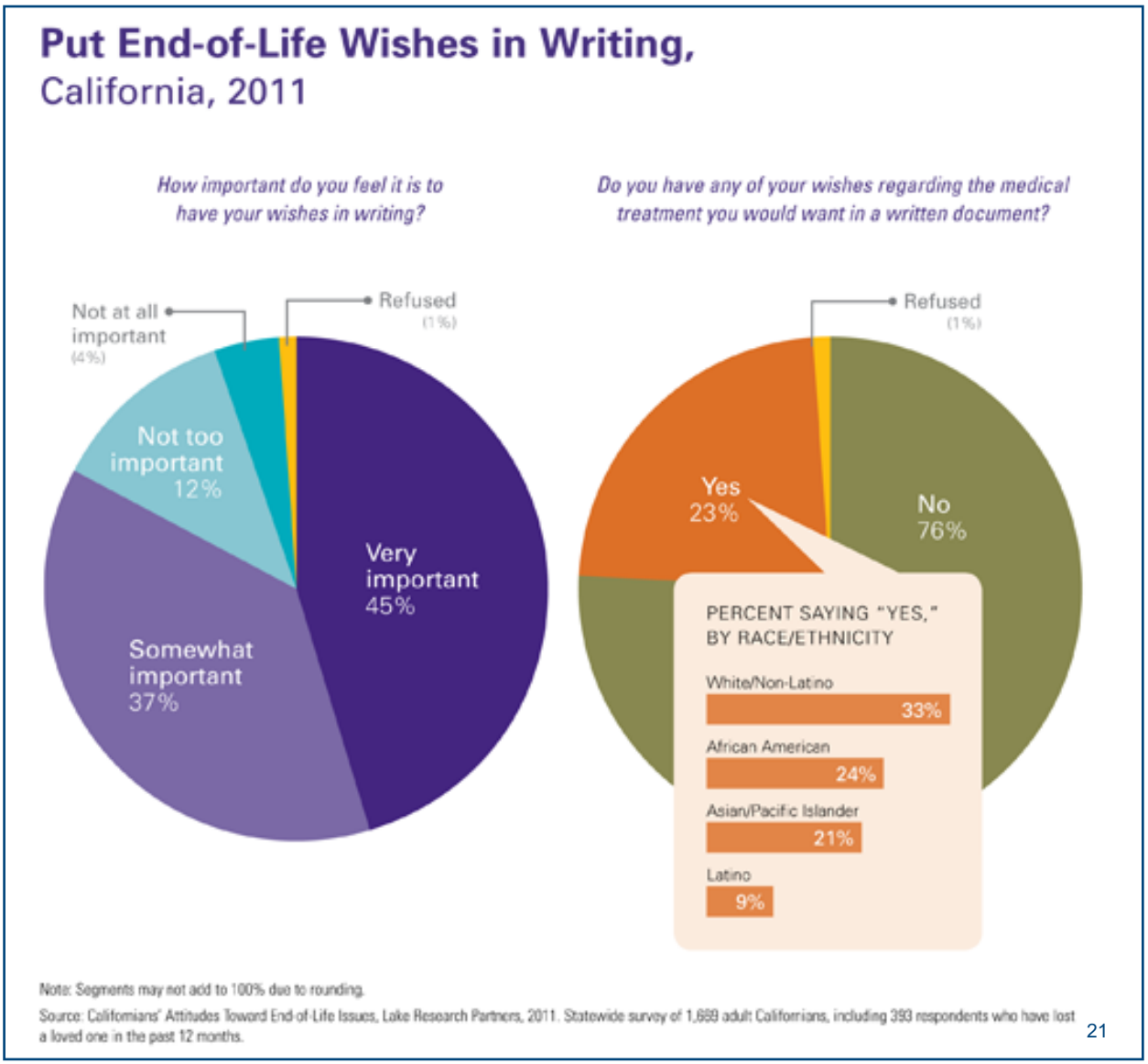
A culture of silence and avoidance often accompanies end-of-life conversations and decisions. Doctors can be uncomfortable having conversations about what is important for a seriously ill patient, and in medical training, are in no way taught or rewarded for "talking" about end-of-life care in a system that "rewards action."[19] According to a 2010 study published in *Cancer*, one out

of three physicians do not discuss prognosis with cancer patients with less than six months to live who are still feeling well and rather wait until treatment options run out.[14]

Considering value or quantifying cost-effectiveness of treatment in the context of end-of-life care is especially challenging given the personal and deeply emotional nature of such endeavors. This is why debates about "death panels" occurred when early drafts of the Affordable Care Act discussed provisions about compensating providers for end-of-life planning consultations. Still, a majority of adults surveyed believe that discussions about end-of-life care should be covered by Medicare.[20]

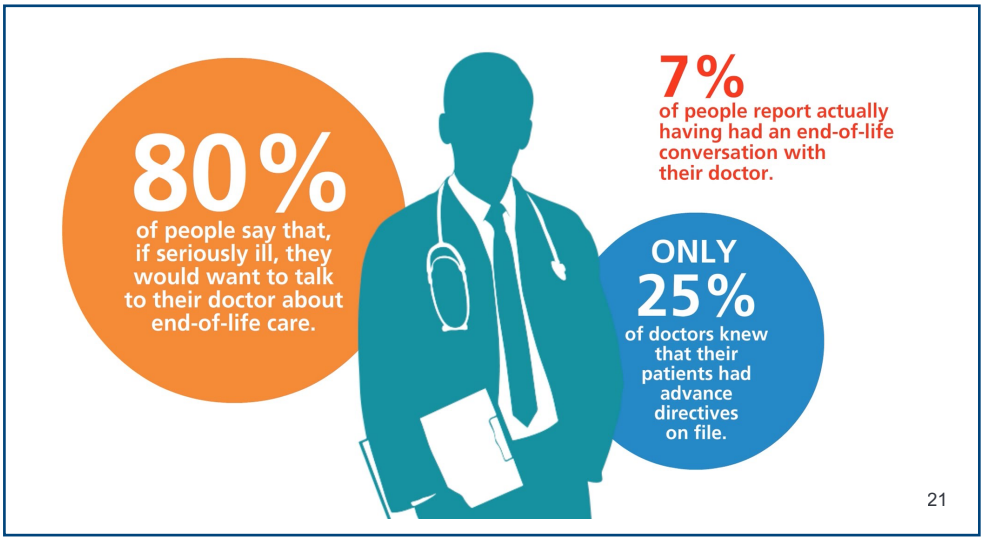


The root of the problem with how end-of-life care is approached in the U.S. is that patient needs are not being met. Many patients have no place where they have expressed their wishes about how they would like to spend their last months, even those who are seriously ill. Though most patients deem it important to communicate their wishes and put their wishes in writing, a majority have not followed through on those wishes, displayed in the figure below:



Other alarming statistics about unmet patient needs for end-of-life planning and care:

- "80% of surveyed patients stated that they would like to talk with a doctor about end-of-life wishes, but only 7% had benefited from such outreach."[21] (California Healthcare Foundation Study)
- Only a third of Americans have an advanced directive or living will which lay out preferences for life-sustaining treatment and/or appoints a health care proxy[14]
- Only 15%-22% of seriously ill elderly individuals had their preferences about advanced care in their medical records[22]
- Though the vast majority (71%) of Americans wish to die at home, 75% die in a hospital or nursing home[23,24]



At the root of the issue is the apparent lack of provider comfort in having end-of-life conversations. Despite the recent Medicare ruling, which allows doctors to bill $86 to discuss end-of-life care in office visits or hospitals, only about 14% of physicians in one survey report actually billing Medicare for such visits.[25] Fewer than one third of physicians also report having had any form of training on end-of-life discussions, which seems to be a significant driver of the underutilization.[25] But with increases and improvements in training ongoing, this is a problem that does not appear to be shrinking nearly enough. One of the main reasons believed to contribute to the inadequacy of physician-patient end-of-life conversations is that "for some doctors, the psychological resistance to initiating [end-of-life conversations] is enormous."[26] This may be for a variety of reasons such as: the emotional toll of giving bad news and seeing to patients and families in pain is high and may take away "hope" and such conversations may make doctors feel like they have failed when they are not yet ready to "give up." With nearly all physicians being trained in curative medicine, many of today's doctors may not feel that they have much to offer patients if they cannot provide medical treatment or options, pushing off such end-of-life care conversations until it is too late. Also at fault is the rush of patient encounters and administrative burden placed on providers – it is simply difficult to make time to have lengthy conversations around advanced care planning, which is often an evolving process requiring several conversations and which cannot be distilled into one single encounter.

Though some of these end-of-life conversations can take place in hospitals, the reality is that most do not. Hospitals are incentivized to take care of sick patients and triage patients to inpatient care or ICUs when they are very sick rather than send patients to hospice or advocate

for more palliative end-of-life care. Furthermore, by the time patients arrive in the hospital with terminal illnesses, they are too sick to receive maximum benefit from advanced care planning conversations that are better implemented much earlier during their course of care. This, in combination with treating physicians in hospitals not often having established relationships with patients, makes end-of-life conversations both difficult and less effective. Still, as healthcare reform and shrinking budgets become more of a reality for hospitals, administrators are turning to hospice and palliative care to help save some costs. In 2000, there were only 700 hospitals in the country with palliative care programs, a number which has since more than doubled.[27] More recently, hospitals have begun integrating palliative care treatments earlier on in patients' treatment courses. This begs the question about what health plans might be able to do better to encourage end-of-life education for patients and increase resources in care settings. Though traditional Medicare Advantage plans offer little outside of (the recently added) coverage for advanced care planning with doctors, some innovative health systems, such as CareMore, an integrated health plan and care delivery system for Medicare/Medicaid patients, put in place teams and resources to improve the quality and frequency of end-of-life conversations.[28]

There is much to be gleaned from success stories domestically and abroad. In one county in La Crosse, Wisconsin, 96% of people who die do so with an advance directive, which is more than three times the percentage of people with advance directives across America.[29] La Crosse instituted an advance directive program to help their patients, and in turn also found a major reduction in healthcare costs: in fact, the county spends less on end-of-life healthcare than any other in the country.[29]

"It turns out that if you allow patients to choose and direct their care, then they often choose a course that is much less expensive."

- ***Jeff Thompson, CEO, Gunderson Health System (in LaCrosse, WI)***

Across the Atlantic, the United Kingdom is known for having high quality end-of-life care, which has been deemed the "best in the world" in two notable scientific studies.[30,31] The conclusions of such studies identified some reasons why the UK's approach seems to work better than the US', including earlier public awareness of end-of-life issues and openness to conversations, more availability to pain-management drugs for palliation, more state-funding of end-of-life care, and higher level policy recognition and support for palliative care.[31]

Training the newest generation of physicians to have better communications skills and increasing the awareness about and frequency of end-of-life conversations will help improve end-of-life care in the US, but a complete solution also requires more palliative care experts and changes in policy as well as changes in how medical care itself is delivered. Technology posits to play a major role in executing many of these needs, such as by increasing the training and availability of trained palliative care professionals and expanding the space for end-of-life conversations beyond hospitals and physicians' offices.

Reducing costs associated with end-of-life care is a controversial matter and brings with it the connotation of "death panels" and concerns about taking away care from the sick and needy, which were brought up during 2012 debates about the Affordable Care Act. These controversies stem from religious sentiments that hold strong in much of the U.S.; many believe discussions about end-of-life care violate the sanctity of life and equate hospice and palliative care with "giving up."[31] "Concerns, most notably voiced by Sarah Palin, are that such policies and conversations encouraging physicians to act unethically or to ration care to those who are more able. Many still believe that the government involving itself in conversations or planning about end-of-life care "puts seniors in a position of being put to death by their government."[32] However, reducing costs in end-of-life care can and should be done without taking anything away from patients, and in fact, should occur in a synergistically with patient empowerment and betterment of patient quality-of-life. Start-ups that have achieved success in this terrain, such as Aspire Health and Vital Decisions, have capitalized on the need for patient empowerment in end-of-life decisions through facilitating communication and improving access to resources.

Select End-of-Life and Palliative Care Startups Impacting the Industry

The following pages outline some of the companies operating in the end-of-life and palliative care space that often work with and provide resources to patients, caregivers, and/or providers to improve the advanced care planning process as well as quality of and access to treatment.

Companies are organized in the following three categories based on function:

- Accessibility of Palliative and Hospice Care
- Advanced Care Planning Technology
- Analytics

Accessibility of Palliative and Hospice Care

Aspire Health

Community-based Palliative Care

Aspire Health's specialized clinicians work with providers and payers to bring in-home palliative care to patients facing serious illness (and to support their caregivers).

Aspire partners with specialists and primary care physicians to offer:

- **In-home symptom and disease management**
- **Medication regimen monitoring**
- **24/7 on-call, support services**

Headquarters: **Nashville, TN**

Aspire's network of healthcare professionals, chaplains, and social workers serve patients facing serious and potentially terminal illness(es)

Aspire coordinates a comprehensive care plan and often enables patients to avoid unnecessary and costly emergency visits and hospitalizations

- About 25% of Medicare costs are accounted for by the last year of patients' lives, largely because the delivery system is structured for inpatient care. By shifting care to other settings, Aspire aims to reduce costs.

Aspire currently contracts with 20 health plans, operates in 25 states, and in 67 cities:

- **Acquired** by Anthem, Inc [undisclosed amount] in May, 2018
- $53.5M raised in 4 rounds since 2011
- $32.0M Series D led by Google Ventures in 2016
- $15.0M Series C by Oak HC/FT in 2015
- $5.5M Series B led by BlueCross BlueShield Ventures in 2014
- $1.0M Seed by Nashville Capital Network in 2013
- Series A led by Nashville Capital Network and Altitude Ventures in 2013
- 501 to 1,000 employees (Crunchbase / LinkedIn)

http://aspirehealthcare.com

Accessibility of Palliative and Hospice Care

ResolutionCare

A palliative care team that sees patients only with house calls and virtual house calls, shifting the center of care and support to the home.

Headquarters:
Eureka, CA

Interdisciplinary team of trained care providers who provide palliative care without the infrastructure of an outpatient clinic, conducting home consultations and utilizing home-based videoconferencing

Provide patients with care centered around the home, preventing loss of contact with patients as they become more ill; increases capacity and access to palliative care

Compensated via outcomes-based payment model by strategic partners
$450K Angel in 2016; $150K Crowdfund in 2014
11-20 employees (Pitchbook / LinkedIn)

Counties in Northern California
www.resolutioncare.com

Health Essentials

Physician-driven care management company that delivers high quality post-acute care to the frail and elderly

Headquarters:
Santa Ana, CA

Health essentials consists of a family of companies (hospices, DMA, and pharmacy services) that bring hospice and palliative care services to patients' homes

Consolidates post-acute clinical services into a single source; goals to coordinate care, engage families, drive quality outcomes and decrease costs across the continuum of care

$1M by SV Health Investors and Bessemer Venture Partners in 2013;
$8.5M in 2017
501 to 1000 employees (Crunchbase)

Covers 250+ skilled nursing facilities
California, Arizona, Nevada
www.healthessentials.com

Advanced Care Planning Technology

Provides telehealth Advance Care Planning (ACP) services to health insurers and health care providers, reducing unnecessary care for people with serious medical conditions

Headquarters:
Austin, TX

Trained “facilitators” assist patients and families via telehealth to consider and understand options, create a plan, and store documents

Iris Plans is the first organization offering nationwide, complete ACP that is tailored specifically to individuals’ circumstances and preference

ACPs result in higher quality care, less stress on loved ones, higher satisfaction, and lower costs
$5.1M Series A (LiveOak / Activate Venture Partners, 2017); $850K (Green D Ventures, 2016)
11-50 employees (Crunchbase)

United States
www.irisplans.com

Specializes in Advance Care Planning Behavioral Science, working closely with individuals and families to ensure each patient's priorities and values are understood and honored

Headquarters:
Edison, NJ

Social workers and health care counselors carry out interpersonal and family interventions alongside integrated technology to facilitate more effective advanced illness decision making

The collaborative decision-making process better reflects individual preferences leading to fewer unwanted treatments, and reduced costs; Engages with >30,000 patients/year

$Undisclosed Amount by Windrose Health Partners and MTS Health Investors in 2012
251-500 employees (Crunchbase)

Partner with 12+ insurance companies
United States
http://vitaldecisions.net

Advanced Care Planning Technology

everplans

Everplans is a service that helps anyone gather, securely store and share all of the information, documentation and wishes that families may need.

Headquarters:
New York, NY

The consumer-facing service provides step by step guidance, thousands of original articles and resources, and a secure vault that helps clients share info with loved ones

A secure, digital archive including wills, trusts, insurance policies, account passwords, health and medical information, advance directives and DNRs, final wishes and funeral preferences, etc

$6.4M Series A led by Mousse Partners in 2016;
$6M Seed led by Scout Ventures in 2013-14
11 to 50 employees (Crunchbase)

United States
www.everplans.com

VYNCA
Advance Care Planning Solution

Vynca is a comprehensive software solution for Advance Care Planning, specializing in digitizing forms and integrating them into clinical workflow

Headquarters:
Palo Alto, CA

Vynca's cloud-based patient matching technology enables easy access to critical advance care planning documentation and notifies providers and patients about new documentation within the EHR

410K+ care plans are currently managed by Vynca
37% reduction in hospital admissions & **59%** reduction in ICU admissions when Vynca was accessed

$4.89M early stage VC by [undisclosed] in 2015
$Undisclosed amount by Link-age, Founder.org, and MedTech Innovator

Solutions for ACOs, state registries, hospitals and health systems, post-acute care in the U.S.
www.vyncahealth.com

Advanced Care Planning Technology

cake

A user-friendly digital platform for advanced care and end-of-life planning

Headquarters: Cambridge, MA

	An online profile that guides discovery of end-of-life preferences and generates and stores key documents for clients which can then be shared with the people who need to know
	Provides peace of mind and easy to use platform to individuals and organizations (providers, health plans, and employers) to aid end-of-life planning and care
	$1.4M Seed by Pillar Companies in 2017 $10K Grant by MassChallenge in 2015 1 to 10 employees (Crunchbase)
	Worldwide www.joincake.com

grace

Grace is the nation's largest, most trusted hospice and assisted living directory

Headquarters: Santa Monica, CA

	Grace's search tool assists with finding hospice care, funeral homes, real estate agents, estate lawyers, and more
	Grace brings peace of mind to end-of-life planning by consolidating the resources for navigating the space into one
	$2M early stage VC by Luma Launch, Chicago Ventures, Silicon Badia in 2016
	United States www.meetgrace.com

Analytics

Medalogix, a health data analytics firm, offers readmission assessment services for patients in home health or skilled nursing facilities

Headquarters: Nashville, TN

Includes a bundle of products that analyze patients at risk for hospital readmission or for decline or who should be considered for hospice benefit and assists with triage, follow-up, and communication

Assists home health agencies to guide and balance care by highlighting at-risk patients and improving patient outcomes via the creation of clinical programs for managing large populations

$5M Series A by Coliseum Capital Management in 2014; $300K Seed in 2012
1 to 10 employees (Crunchbase)

United States
medalogix.com

Looking Forward: The Future of End-of-Life and Palliative Care

End-of-life care in its present form is unsustainable for the U.S. economy and the changing population. It fails to account for health disparities, such as discrepancies in health literacy, patient education, or access to care. It is also economically inefficient and too often poorly coordinated, which analytics and telehealth companies have begun to remedy. The highlighted companies in this report are part of the force forward to improve the way end-of-life care is approached in the U.S. These unique technologies and services range from telehealth providers of hospice or palliative care to online storage platforms for end-of-life documentation that integrate into medical records and predictive analytics that prove to improve triage to hospice. These solutions have the potential to address the limited access to palliative and hospice care in rural areas, the culture of silence surrounding end-of-life conversations, the lack of information about patient end-of-life wishes in medical charts, and the common practice of not identifying at-risk populations until it is too late.

Still, there are even more opportunities and niches within the space where innovations can be very helpful in helping patients, caregivers, and healthcare professionals through navigating advanced care planning and going through or providing end-of-life or palliative care. Given trends and gaps in the continuum and integration of care, new solutions that can effectively bring together patients and their families with physicians and health systems will be well-received and will be well-positioned for success. Artificial intelligence may be applied to end-of-life care through better predicting and laying out prognoses and care options to improve upon patient education and by identifying patients for whom end-of-life conversations should be quickly provided. There is also room for new services, including hospital-hospice partnerships and innovative delivery platforms for counseling and training. Value-based care organization and policy makers should especially examine the role of physicians and training; as most patients will expect end-of-life conversations to begin in their doctors' offices, the culture of avoidance about end-of-life topics and quality-of-life in treatment must be remedied.

Software solutions, services, and predictive modeling all play an important role in the new era of end-of-life care, and we at FCA are excited by the opportunities and potential the future holds.

FCA | VENTURE PARTNERS

Founded in 1996, FCA Venture Partners has a long history of investing in successful healthcare entrepreneurs. We are passionate about building sustainable businesses and providing strategic value to our portfolio companies.

FCA invests $3-6M in fast growing healthcare companies making processes in the industry faster, better, and cheaper while improving the quality of care and the patient experience.

With its location in Nashville, roots with Clayton Associates and the McWhorter Family, and deep involvement in the growth of the U.S. healthcare community, FCA Venture Partners is poised to take advantage of disruptive opportunities that help move healthcare forward.

Investing in Entrepreneurs that Improve Healthcare

110 Winners Circle, Suite 100

Brentwood, TN | 37027

Phone: 615-326-4848 | www.fcavp.com

References

[1] https://www.nia.nih.gov/health/what-end-life-care

[2] https://www.kff.org/medicare/fact-sheet/10-faqs-medicares-role-in-end-of-life-care/

[3] https://www.ibm.com/blogs/watson-health/palliative-care-values-based-care/

[4] https://healthdimensionsgroup.com/wp-content/uploads/2017/03/Palliative-Care.pdf

[5] https://khn.org/morning-breakout/end-of-life-care-17/

[6] https://www.theatlantic.com/health/archive/2017/06/how-we-spend-3400000000000/530355/

[7] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638261/

[8] https://www.ncbi.nlm.nih.gov/pubmed/8648872

[9] https://www.debt.org/medical/hospice-costs/

[10] https://journals.lww.com/journalppo/Fulltext/2017/05000/The_Affordable_Care_Act_and_End_of_Life_Care_for.7.aspx

[11] https://www.healthleadersmedia.com/strategy/hospitals-opting-palliative-care

[12] https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

[13] https://turn-keyhealth.com/wp-content/uploads/2016/12/Over-Medicalized-Care-at-the-End-of-Life-in-the-US.pdf

[14] www.time.com/money/2793643/cutting-the-high-cost-of-end-of-life-care/

[15] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3613151/

[16] http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098246

[17] https://well.blogs.nytimes.com/2016/06/30/at-the-end-of-life-what-would-doctors-do/

[18] http://time.com/131443/why-your-doctor-probably-has-a-do-not-resuscitate-order/

[19] http://scopeblog.stanford.edu/2014/05/28/study-doctors-would-choose-less-aggressive-end-of-life-care-for-themselves/

[20] https://www.kff.org/health-costs/poll-finding/kaiser-health-tracking-poll-september-2015/

[21] https://www.chcf.org/press-release/poll-finds-wide-gap-between-the-care-patients-want-and-receive-at-end-of-life/

[22] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2939845/

[23] https://www.cbsnews.com/news/the-cost-of-dying/

[24] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2693192/

[25] https://khn.org/news/most-doctors-unsure-how-to-discuss-end-of-life-care-survey-says/

[26] https://news.aamc.org/patient-care/article/having-talk-when-treatment-becomes-end-life-care/

[27] https://www.ensocare.com/resource-center/end-of-life-care-a-national-conversation

[28] https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_case_study_2017_mar_1937_hostetter_caremore_case_study_v2.pdf

[29] https://www.npr.org/sections/money/2014/03/05/286126451/living-wills-are-the-talk-of-the-town-in-la-crosse-wis

[30] https://www.telegraph.co.uk/news/health/news/11914291/UK-has-best-end-of-life-care-in-world-study-finds.html

[31] http://www.eiu.com/site_info.asp?info_name=qualityofdeath_lienfoundation&page=noads

[32] http://www.politifact.com/truth-o-meter/article/2009/dec/18/politifact-lie-year-death-panels/