

Health Value Return on Investment: *A Framework to Support Private Investment That Improves Health Care and Health*



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Health Policy



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About Duke-Margolis

The Robert J. Margolis, MD, Institute for Health Policy at Duke University is directed by Mark McClellan, and brings together expertise from the Washington, DC, policy community, Duke University, and Duke Health to address the most pressing issues in health policy. The mission of Duke-Margolis is to improve health, health equity, and the value of health care through practical, innovative, and evidence-based policy solutions. Duke-Margolis catalyzes Duke University's leading capabilities, including interdisciplinary academic research and capacity for education and engagement, to inform policymaking and implementation for better health and health care. For more information, visit healthpolicy.duke.edu.

About the Capital Impact Council

The Duke-Margolis Capital Impact Council, co-chaired by FlyteHealth Executive Chair [Dr. Cheryl Pegus](#) and Duke-Margolis Director Dr. Mark McClellan, is comprised of mission-aligned venture capital and private equity investors and Duke-Margolis [Advisory Board](#) members. The council is dedicated to:

- Advancing use of evidence and establishing best practices for achieving measurable health value improvements through private investment in health care.
- Driving the impact of private investment in health care to improve the lives of people and communities.

Learn more about the Capital Impact Council at healthpolicy@duke.edu/cic.

EXECUTIVE SUMMARY

We present a Health Value Return on Investment (HV-ROI) Framework designed to align health system and investor incentives around private investment that improves health care and health. This Framework was developed with support from the Duke-Margolis Institute for Health Policy's **Capital Impact Council (CIC)**, comprised of a group of experienced venture capital and private equity investors dedicated to advancing private capital investment that demonstrates impact on health care outcomes, access and affordability, alongside financial returns. Through sharing and developing case examples, practical tools, metrics and analyses, we aim to strengthen and expand the routine use of effective Health Value assessments to increase the positive impact of private capital investments for patients, health care professionals, communities, entrepreneurs and investors, and advance an evolving, expanding approach for doing this sector-wide.

In our challenging and dynamic health care system, private capital investment is critical for enabling progress to improve health, expand access, reduce disparities, and lower costs. Health care organizations must invest in innovation that delivers new capabilities, staffing structures, patient engagement approaches, and care delivery models—especially when the opportunities ahead for reducing health risks, increasing access to treatments, and making care more affordable requires changing the status quo. But while for-profit health care investment should create financial returns by improving health and the value of health care, for-profit health care investment has been criticized for focusing on financial returns at the expense of patients, clinicians, and communities.

At this critical time for effective private investment in health care, the Duke-Margolis Institute for Health Policy established the CIC to bring together like-minded investors committed to support the development and sharing of resources and evidence around advancing health value and investment returns together. CIC members are private investors leveraging their individual commitment to driving broad-based health value through testing and sharing results in their own investment activities. CIC members are also committed to seeking additional insights, examples, and collaborations to make substantive HV-ROI assessment more routine and impactful, and to demonstrate to others that this commitment is both valuable to the health care system and fruitful for investors.

The HV-ROI Framework includes the following key elements:

- **HV Model and Evidence:** A baseline analysis of why a proposed investment is likely to have a positive impact on health value as well as positive financial ROI based on published literature and preliminary evidence.
- **HV Key Performance Indicators:** Feasible and worthwhile metrics linked to the HV model that will be tracked and updated, enabling an organization to be proactive in advancing HV alongside financial ROI.

Our review of HV-ROI assessments also identified features of investment group and portfolio company leadership and governance models that help assure diligence and efficacy in implementing innovative health care reforms that increase health value and financial returns.

With investment needed now more than ever to leverage unprecedented needs and opportunities to improve health care, the investment community plays a critical role in assuring that promise is fulfilled. The CIC's intent is that this collaboration, supported by the evidence generated on advancing health value and financial returns, will scale and spread to more investors.

INTRODUCTION AND OVERVIEW

Private investment in for-profit companies in health care, ranging from seed and early-stage investments in emerging companies to investments to support the scaling up of evolving companies, can provide critical resources to support urgently needed reforms. These investments can facilitate health care organizations' ability to leverage innovative services, technologies, and care models with the aim of improving access to better treatments and outcomes, increasing affordability, and strengthening communities. They can be instrumental in driving and scaling innovation by providing capital and talent to advance potentially transformational approaches for information technologies, improved diagnostics and therapeutics, innovative care models, and [more](#). These investments might be expected to generate greater financial returns for investors when they lead to a larger and more lasting impact on improving health care and health. Indeed, studies have shown [such benefits](#) from both [early-stage](#) venture capital investment, which raised [\\$4.6 billion capital](#) in 2023 across 34 funds, and later-stage [private equity investment](#), which raised [\\$19.1 billion capital](#) in 2023.

At the same time, some [studies](#) have focused on specific examples or certain kinds of private investment, particularly private equity investments in specific types of health care delivery organizations, finding [mixed or adverse consequences](#) for health care affordability and quality. Focusing on private equity, Professor Sabrina Howell of the Private Equity Research Consortium [summarized](#), "Private equity firms are basically more responsive to competitive and financial incentives than other types of firms. We know unambiguously that private equity ownership increases productivity, but whether the operational changes are good for consumers—in this case, patients—depends on whether incentives to maximize profit are structured to be well aligned with consumer interests." A [recent investigation](#) by the bipartisan Senate Budget Committee into private equity in health care revealed how certain firms have prioritized profits over patient care, jeopardizing the quality of care and the financial stability of hospitals.

These incentives and the resulting private investments reflect market conditions and regulatory, payment, and other health care policies. But they also reflect the strategy, business policies, metrics for success, and analytic tools of the investors and their companies. Many investment organizations have implemented a range of mechanisms that aim to align investments with improvements in key health-related outcomes, including quality, affordability, and equity. Interest and use in these tools and investment supports are becoming more widespread and rigorous, with increasing availability of real-world data and interest in measuring the impact of private investments on individual and community health, alongside existing assessments of financial health. Such activities are an integral part of investment strategies – without positive health value returns, long-term financial returns are often jeopardized. It is likely to be more difficult to sustain an investment that exploits regulatory or other loopholes that may ultimately be closed. Ongoing pressure for greater transparency, and heightened public scrutiny of questionable investments, can also increase financial risk of investments that do not clearly demonstrate health value.

Consequently, "health value" assessment is an essential and increasingly important part of assessing an investment's expected financial returns. But health value assessment approaches are not yet consistently, widely, and transparently applied. Better tools and supports for assessing an investment's expected impact on health value could help make a health value-return on investment (HV-ROI) assessment a more integral feature of investment decisions.

To address the growing interest and opportunity for health value assessments by private investors and their company leaders in health care, the Duke-Margolis Institute for Health Policy established the **Capital Impact Council**. The Capital Impact Council (CIC) is comprised of a diverse group of health care venture capital and private equity investors who have joined together to: leverage their individual commitment to driving broad-based health value by sharing data, experience, and tools;

advance the development of more rigorous evidence on supports, resources, and strategies to increase value to all stakeholders through private investments; and transparently share results and learnings to encourage greater participation and impact of HV-ROI efforts. This group was convened through the interdisciplinary and broad-based expertise of Duke-Margolis.

The Capital Impact Council's initial work has focused on synthesizing existing evidence on health value assessment to develop a practical framework and initial case examples for assessing health value, to provide a stronger foundation for utilizing and adopting this approach, and to encourage further collaborative efforts for assessing and realizing health value in a health care investment opportunity.

Building on considerable prior work on this topic, both within and beyond the investment community, we used the following steps to develop our assessment framework:

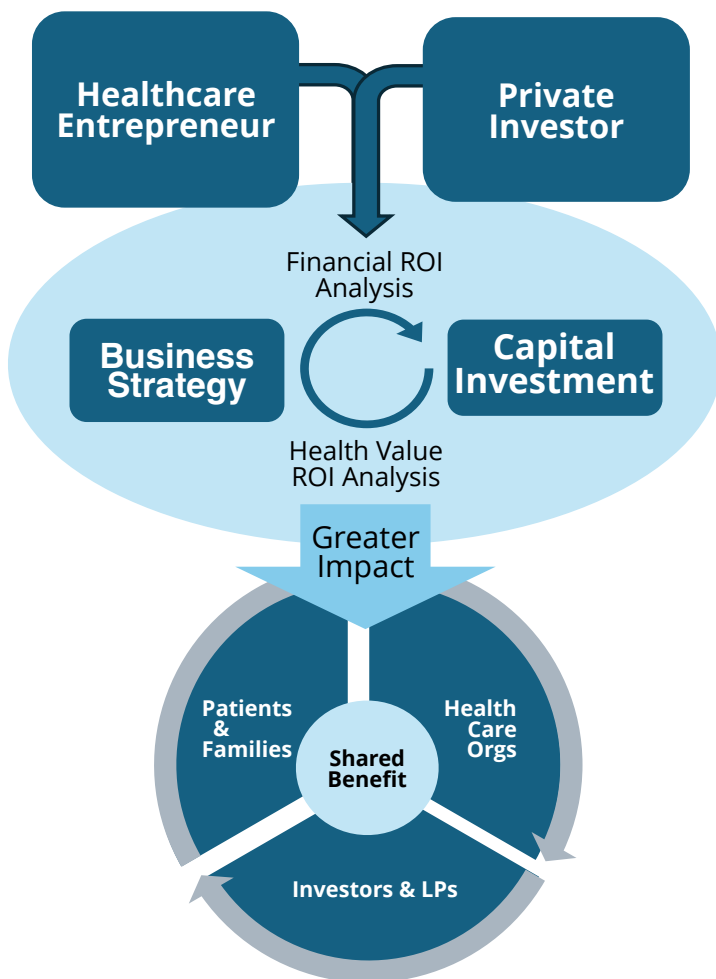
- **Landscape analysis of existing impact assessment frameworks:** Through a preliminary literature analysis and interviews with health care investors, analysts, and health policy experts, we identified three categories of investment assessment resources: general frameworks, health sector-specific frameworks, and application-specific frameworks. Detailed below and in Appendix B, the reviewed frameworks included those that had published, publicly available information for descriptive analysis, or that were provided to us in sufficient written detail directly from investor teams.

- **General frameworks:** Some assessment frameworks are designed to be generally applicable to a broad range of industries, guiding investors or supporting research on the potential impact of a private investment. These include:

- B-Corp's B Impact Assessment focuses on a company's impact based across five categories: governance, workers, community, the environment and customers.
- The Global Impact Investing Network's (GIIN) IRIS+ accounting system provides a framework for investors to measure, manage and optimize their impact. IRIS+ supports custom frameworks based on [Sustainable Development Goals \(SDGs\)](#) or Impact Categories and the strategic goals of the organization.
- The Rise Fund (TPG Growth/Bridgespan Group) Impact Multiple of Money (IMM) estimates the social or environmental benefit that is expected to result from each dollar invested.

Some of these frameworks draw on experiences and assessments from "Environmental, Sustainability, and Governance" (ESG) programs that many companies conduct alongside their core business assessments and decisions. While we drew on elements of ESG strategies, our goal and our approach is different: we focus on investment assessment approaches that are fully

**Figure 1 | Capital Impact Council:
What We Do**



integrated into strategic decisions – that is, they show synergies for a portfolio company's long-term growth and profitability because of their positive impact on health care and health.

- **Health sector-specific frameworks:** Some investment funds have developed frameworks to guide their own investments in health care organizations, technologies, and/or services. For example:
 - 7-Wire's Evaluation criteria are "consumer-first focused" and include assessment methods across ROI (clinical and financial), Value to End User (addressing user needs and user experience), Seamless Integration (e.g., with health plans/systems), Market Traction, and Founder Market Fit.
 - Echo Health Ventures' Impact Program guides its investment decisions and includes a partnership approach to supporting, scaling and tracking the impact of its investments across affordability, quality, experience, access, and growth.
 - American Heart Association's Social Impact Fund identifies the potential impact of an investment by focusing on its broader community-level and health care system effects, as well as its business viability and potential for growth.
- **Application-specific frameworks:** Many investors have reported on particular features and metrics that aim to demonstrate improved outcomes and other impacts for specific conditions (e.g., Type 2 Diabetes, musculoskeletal conditions), populations (e.g., Medicaid beneficiaries or employees), types of products (e.g., digital/AI tools, virtual care, care management programs), or some combination of these features. Independent assessment organizations, such as the [Peterson Health Technology Institute \(PHTI\)](#) and the [American Medical Association \(AMA\)](#), have also developed and applied evaluations that support such assessments in particular clinical areas, and are expanding their activities as health data and evaluation methods improve.

- **Review to determine core features of assessment frameworks:** Based on our preliminary literature assessment and interviews, we identified a draft set of two overarching domains that could provide a foundation for a health sector-specific assessment framework: **Health Value Model and Evidence Review; Key Performance Indicators and Assessment Plan**. We then conducted an in-depth review to map concepts, elements, and metrics from existing frameworks to our draft domains. This process identified common features as well as differences in focus areas and specificity across the frameworks we reviewed, as noted above. In particular, some of the dimensions in our comprehensive synthesis were not explicitly included in specific frameworks. Our review also provided an opportunity to further refine our domains and additional details within each domain. **Some studies and interviews also noted key features of the Leadership Team and Governance that were reported to advance health value; though they are not the primary focus of our analysis, we include these findings below as well.**

- **Build-out of Health Value Return on Investment Framework:** This review resulted in our proposed **Health Value ROI (HV-ROI) Framework**, summarized in [Figure 2](#). We then applied our framework to the publicly-available assessment tools described above, both to provide supporting documentation for the HV-ROI Framework presented here and to identify potential gaps in need of further assessment guidance. Our proposed domains include the following, briefly summarized in [Figure 2](#):

- **Health Value Model and Evidence Review**
- **Health Value Key Performance Indicators and Assessment Plan**

We are also considering Leadership Team and Governance features that may also be associated with the successful implementation of a HV-ROI framework.

Figure 2 | HV-ROI Framework

HV Model and Evidence

HV is a baseline analysis of why the proposed investment is likely to have a positive impact on health value in addition to positive financial ROI based on published literature and preliminary evidence.

- HV dimensions potentially include population/intended users, patient impact (affordability, access and outsources), provider impact, time to impact, financial ROI measurement (IFF/Cash on Cash/ etc.), and financial-health ROI alignment.

HV should be evidence based, to the extent evidence is available, with a plan for developing further evidence

- Evidence may include data from investments pertaining to ROI (financial and health value), review of published studies, reports, expert opinions, etc.

HV Key Performance Indicators (HV-KPIs) and Assessment Plan

HV must be feasible and worthwhile to measure and must link to the HV model.

- Mix of validated forward, current, and lagging indicators
- KV-KPI examples include key clinical results, access to care, clinician and consume experience, utilization, TCOC, health equity, community well-being, time to impact, etc.

Assessment plan is a prospectus that allows an organization to be proactive in advancing HV measures alongside financial KPIs.

Our future development of case examples and analyses will consider data, where available, on how investors, LPs, and portfolio companies are implementing governance features and processes that facilitate the routine use and updating of HV models, evidence, KPIs, and assessments within investment and business strategies.

Appendix A summarizes the existing frameworks that were analyzed in our review, and **Appendix B** summarizes the full results of our review to describe how these assessment resources map into our HV-ROI Framework.

In the remainder of this paper, we first describe the two foundational domains of the proposed HV-ROI Framework in detail, including both domain content and how this content can be advanced through features of the investment and entrepreneurial team and their governance structures and processes. We then illustrate how the framework can be applied to specific types of health care investments. These framework features are not widely developed or consistently adopted when they may be relevant, suggesting that investment assessments will benefit from further collaboration among investors,

innovation leaders, engaged patients, potential customers, and independent experts, to flesh out these tools and make them easier and more impactful to implement.

Effective health value assessments require intentional effort, ongoing management, and resources. Individual companies only have limited resources, but all of us together have a strong shared interest in improving the infrastructure for assessing the impacts of private investment on health, health care, and affordability. Consequently, we conclude by describing opportunities for collaborations to accelerate the effective use of frameworks like ours, as well as potential ways in which policymakers can use and advance the development of better evidence on the impact of private investment, with the goal of achieving more routine and systematic use of health value assessments as integral components of financial assessments.

Health Value ROI Assessment Domains

1. Health Value Model and Evidence

Our first domain is a Health Value Model (HVM) and its supporting evidence review: a baseline analysis of why the proposed investment is likely to have a meaningful positive impact on health value. The HVM encompasses health value diligence in conjunction with financial diligence as the foundation for private investment. The HVM described below should be evidence-based, to the extent that evidence is available, and should note key gaps in supporting evidence. As with financial diligence, “value diligence” involves reviewing published studies, reports, expert opinions, and other analyses that are relevant to the investment. Health care investment opportunities generally include some assessment of these issues in developing their business strategy. By integrating data from a range of such approaches in use today, our aim is to help investors, company leaders, and other stakeholders include the key health value considerations for their particular case.

Value in health care is multi-dimensional and has been defined in multiple ways across products, services, investment areas, and stakeholder perspectives. [Michael Porter’s perspective “What Is Value in Health Care?”](#) defines value as outcomes relative to costs. The Institute of Medicine’s Six Domains of Healthcare Quality framework proposes assessing the value of health care based on whether it is safe, effective, patient-centered, timely, efficient, and equitable. In our framework, we describe a range of potentially important value dimensions that should be considered. We note that patient and caregiver perspectives on health care quality and value are critical for any HV-ROI assessment.

A. The Health Value Model should consider the following dimensions, incorporating a logic model linked to the baseline evidence available to assess potential health value benefits and risks:

- Population and/or intended users
- Magnitude of expected impact(s) in key dimensions, compared to the status-quo trends in the absence of the investment:
 - Patient Impact
 - Clinical Results (e.g., health outcomes, safety, quality of care)
 - Access to care (e.g., digital supports to enable self-care, at-home care)
 - Affordability
 - Engagement (e.g., patient and caregiver activation and experience, customer experience)
 - Appropriateness for gender, ethnic and cultural differences
 - Provider Impact
 - Clinician experience and burden (including ease of integration into workflows and consequences for health worker experience)
 - Clinician business impact
 - Willingness to adopt new service/product innovations
 - Payer and purchaser Impact
 - Health care utilization (e.g., increased access and utilization of high-value care, reduced use of low-value care)
 - Health care spending (including investment area and broader health care spending)
 - Willingness to pay for/adopt new service and product innovations
 - Community Impact and sustainability
 - Community health care access and community-level measures related to above
 - Community well-being (e.g., resilience/progress on local resilience and health priorities)
 - Costs and resource use—societal, purchaser, payer, and individual
 - Impact on health disparities (e.g., closing gaps, potential differential impacts across population subgroups)
 - Environmental sustainability (e.g., consumption, waste, emissions)
- Expected time for impacts to emerge
- Uncertainty assessment (e.g., likelihood/confidence in estimated impacts based on quality of evidence) through periodic planned evidence review

- Important potential undesirable consequences in above dimensions or others not already considered (e.g., adverse health events, price or cost increases, adverse impacts on needed capacity, undermining community or workforce resilience, etc.).

Because a solid financial business case is foundational for investment, and because financial returns have important interactions with health value returns, the HVM should assess the extent that health and financial ROI are correlated—financial and health-value ROI alignment. For example, a private capital-funded innovation that improves access to care by making it easier to bill for a particular medical service may succeed as a positive financial ROI for the provider organization for the investor, but will have higher health ROI if the innovation also helps target the patient population that will benefit. Such an alignment will also promote the development of data and evidence to confirm that such health benefits have been realized, as we describe below.

Many of the assessments we reviewed noted that health value considerations may affect both the potential scope of financial returns and the willingness of particular types of investors to support such initiatives.

Investors in the health sector are highly varied and have a wide array of investment theses, structures, investment horizons and objectives. For example, an investment that improves outcomes substantially but is only accessible to those who can afford it might have different expected financial returns when compared to an investment targeted primarily to Medicaid-eligible populations. However, a financially sound Medicaid-focused investment may be more attractive to investors and stakeholders who prioritize strategies to reduce disparities in health care access and health outcomes, and could also generate greater financial returns with Medicaid contracting terms that also align with value.

Table 1 shows five major types of private investment funds: impact-first, family offices, corporate venture capital, independent venture, and private equity. Independent venture and private equity funds generally depend on funds from Limited Partners and all these investors engage in extensive diligence to assure financial returns. Consequently, all can benefit from a clear, evidence-based HVM that assesses health value-financial impacts and synergies to reduce financial risks (e.g., regulatory actions, loss of consumer trust and thus demand, etc.) and maximize financial and health-value returns. The CIC draws on all these investment perspectives.

Table 1 | Investors in Private Companies

Types of Investors in Private Companies	Description
Impact-First Investment Funds	Funds that support beneficial social or environmental outcomes in addition to generating long-term financial returns
Family Offices	Privately held firms that handle investment management and wealth management for wealthy families, with strategies that reflect family priorities and interests including long-term financial returns
Corporate Venture Capital Funds	The investment of corporate funds directly in external startup companies that provide financial returns and improve the investors' capacity to compete in delivering health value
Independent Venture Capital Funds	Standalone entities that raise funds from external investors, such as pension funds, endowments, or wealthy individuals to invest in startups.
Private Equity Funds	Pools of capital raised from external investors to be invested in private companies that typically have demonstrated proof of concept and provide an opportunity for a high rate of return on capital that enables more rapid scaling.

As [Appendix B](#) illustrates, not all frameworks include all dimensions, as many health value dimensions are not relevant for all types of investment opportunities. Identifying measures of health value that are feasible, meaningful, and fit for the particular context of an investment is necessary in applying the health value framework to particular cases. Consequently, this general framework will benefit from case examples and other evidence to increase its flexibility and practicality across the diverse contexts of particular health care investments.

B. The Health Value Model should assess what is known and uncertain about the investment's health value though a review of existing evidence and, looking forward, should describe how a feasible plan to demonstrate the investment's health impact will be developed and refined as the business plan evolves.

Financial risk assessments of private investments involve careful and thorough analysis using well-established methods, providing a thoughtful basis for determining both expected financial ROI and a financial risk premium for higher-risk projects. These methods are linked to an initial assessment of the quality and certainty of evidence on key dimensions of health value at the time of investment.

Complementary "health value diligence" in conjunction with financial diligence involves reviewing data from the investment target's operational delivery and clinical programs, customer case studies, published studies and clinical trial results, reports, expert opinions, and other analyses to the investment. Especially at early stages, the evidence review will reveal uncertainty about health value returns and may help identify potential risks of adverse health consequences of the investment. For these reasons, an assessment of the relevance, quality, and completeness of the available evidence constitutes an important aspect of our first domain of HV-ROI assessment—that is, a thoughtful assessment of the likelihood of achieving the health value objectives as well as the likelihood of avoiding undesirable health value consequences from the investment, as noted above.

For early-stage venture investments in start-up companies, relevant evidence may be speculative and limited, such as early results and small-scale proof-of-concept implementation, or clinical evidence and expert opinion relevant to the logic model that supports

the investment. Given the limited evidence to support the logic model behind early investments, tools to aid these early-stage investors should help investors plan for confirming HV-ROI alongside financial ROI as the investment advances.

As firms mature and seek larger investments to scale and extend promising early results, evidence of health value impact should become more directly observable alongside evidence of financial growth opportunities. For example, these companies are often compared against peers or against known data baselines in well-considered control or comparison populations, although such data is not always publicly available. Later investments in companies aiming for larger-scale impact can benefit more readily from independent evaluations, including third-party assessments where the company or its customers make data available to independently assess positive health value ROI.

Evidence assessment resources are becoming more common as electronic data and analytic capabilities continue to improve. For example, the Peterson Health Technology Institute reviewed published studies, presentations, news releases, and other types of evidence identified as relevant to the clinical effectiveness of [digital musculoskeletal care](#) companies. Their review identified pain reduction and improved physical function as the key health outcomes for digital health companies to evaluate, and used evidence on these outcomes as a basis for their company assessments. Other organizations—such as AMA, ICER, as well as a range of payer, provider, and employer organizations—have also conducted evidence reviews when sufficient evidence becomes publicly available. Resources like these should be used to support the Health Value Model to guide HV-ROI assessment for new investments in similar areas. Finally, some nonprofit organizations (e.g., the Digital Medicine Society) and companies (e.g., Evidation) conduct assessments in particular areas of health care investment. Many of these entities have made their value assessments available to the public. Supporting and incorporating these learning and assessment capabilities into baseline models and investment strategies can also advance the use and impact of health value assessment.

Most health care investments occur in the context of a substantial level of regulatory and/or public payer involvement, and thus may face uncertainty about future policies. The evidence review should identify

potential areas where plausible policy changes could have important positive or negative consequences for the investment's health impacts. Indeed, such evidence will be helpful for developing strategies to improve and sustain policies that encourage private investments which advance population health and health care value goals, and which can also identify risks to financial returns from investment strategies that create health value risks. While our focus is on investor strategies, we expect that further development of health value

assessments and transparent evidence can inform policy reforms that better align financial and health value returns in health care.

The evidence review should result in a clear and feasible foundation for developing health value key performance indicators and an assessment plan, built into the investment strategy and investment monitoring process, as we describe next.

2. Health Value Key Performance Indicators and Assessment Plan

A. The Health Value Key Performance Indicators (HV-KPIs) for an investment are measurable indicators relevant to the key health value dimensions for the affected populations and users, and should flow directly from the HV impact assessment.

The HV-KPIs must be feasible and worthwhile to measure, ideally with expected forecasts and uncertainty assessments like those provided in an investment prospectus for financial returns. Uncertainty may initially be high—including uncertainty about whether the desired HV-KPIs can be measured reliably or will ultimately be the most important health value HV-KPIs related to the investment strategy. As evidence accumulates, repeatability and transparency should improve reliability for those involved.

The specific HV-KPIs depend on the populations affected and the services provided, but they should generally connect to the key dimensions of health value described in [Section 1](#). Here, we illustrate this approach for an investment related to improving outcomes for certain types of patients with or at risk for Type 2 Diabetes. Such a HV-KPI assessment plan could be the basis for developing the data needed for tracking the HV-KPIs as the investment advances:

- Key clinical results for affected users (often patients or consumers, but also provider organizations, payers, employers, or states)
- Diabetes screening rates in high-risk populations, percent of diabetes patients with reduced HbA1c, average reduction of HbA1c, improved patient reported outcomes (e.g., healthy days), increased percent of time in range (TIR)

- Access to care
 - Percentage of diabetes patients with a regular primary care provider and adherence to appropriate medications
- Appropriateness of care
 - Percentage of patients for whom care is relevant due to special considerations such as gender, ethnicity, disability or other reason that warrants altering the product or service—for instance, pulse oximetry devices are known for significant errors in darker-skinned patients as compared to light-skinned patients
- Clinician experience and administrative/financial burden
 - Reduction in per-patient clinician work time or other clinician productivity measures, physician product rating
 - Workforce participation
 - Alternative financial supports for clinicians that may otherwise face adverse financial consequences, such as shifts to patient management payments from fee-for-service procedure payments to advance alternative care models that reduce use of costly but avoidable procedures)
- Patient/user experience
 - Increase in measures of patient or caregiver experience, convenience, and satisfaction or net promoter score
 - Measures of quality incorporate patient-centered definitions

- Health care utilization
 - Reduction in hospitalization rates with diabetes-related complications, emergency department and hospital outpatient visit rates, use of high-cost monitoring procedures, savings from patients with reduced HbA1c, share of patients who progress insulin use or conversely who can discontinue diabetes medications while maintaining glucose control
- Spending and resource use
 - Reduction in diabetes-related medical spending, out-of-pocket spending, and total medical spending, or a composite of such measures
- Health equity and disparities (i.e., potential differential impacts across population subgroups)
 - Patients served with multiple language availability, service availability in underserved communities, other supports to promote inclusion and access
 - Above clinical and access measures where feasible for racial, ethnic, language, urban/rural, and socioeconomic population subgroups
- Community well-being (resources available, resilience)
 - Measures of use of community resources, burden on safety-net providers, uninsured and uncompensated care
- Time to impact and “terminal impact” (expected change in key impact dimensions at the end of the investment or the assessment period)
 - Average time to HbA1c reduction, average sustained HbA1c reduction (or transition from requiring diabetes medications), financial sustainability while maintaining results

B. The investment HV-KPIs should be incorporated in a Forward-Looking Health Value Assessment and Reporting Plan.

As we have noted, investment strategies evolve over time in response to key market factors including uptake, financial returns, and health care and health impact—all of which are related. Consequently, HV-ROI assessment should include a prospective component, providing a meaningful and feasible pathway for reducing this uncertainty and demonstrating that the organization is

engaged in ongoing attention to health value, including revisions in its operational, clinical and financial strategy and implementation to improve HV-ROI prospects as additional experience and evidence become available. While initial refinements in early-stage, privately held companies are likely to occur without public reporting, all organizations should have a clear plan toward health value public reporting as the company matures and its impact in the communities where it operates becomes more substantial. This plan could include:

- Establishment of an ongoing internal assessment of progress on health value KPIs alongside usual financial updates, based on sound and validated evaluation methodologies, to be shared with investors, with plan for implementing strategic adjustments and corrective action when needed
- Commitment to external/public reporting of HV-KPIs as the investment matures and scales
 - Public reporting should occur as the company's impact on a patient population or community grows, and before a company makes an initial public offering
 - Barriers to reliable reporting on HV-KPIs should be identified, along with potential steps to address these barriers

We expect that the key elements of a HV-KPI assessment plan can be summarized early in an investment with the expectation of providing increasing transparency as the investment evolves and its impact becomes clearer. As investors and companies continue to assess and revise their financial projections, this assessment plan will evolve to greater specificity and certainty along with the business plan.

[Nesta](#), a UK based nonprofit entity that aims to advance investment accountability for results, incorporates this approach by requiring different levels of evidence based on the stage of investment. Early-stage investments require only internal data that indicate or suggest positive change. Later-stage investments are required to demonstrate a causal impact of the investment on key performance indicators, using a control or comparison group and eventually third-party evaluations.

Barriers remain to implementing these strategies. Substantial and ongoing progress in electronic data and analytic methods have not yet scaled into readily usable, validated tools or platforms that can routinely support

these assessments. Recognizing the resulting cost and feasibility limitations, investors and limited partnership (LP) entrepreneurs can encourage collaboration and share effective approaches to promote efficient and reliable independent reporting in their particular areas of health care investment. Steps include improved availability standard performance measures, privately or publicly supported evaluation platforms that can be reused for

different assessments, and/or support for qualified third-party evaluators to facilitate lower-cost, more reliable, and compelling development of evidence on health value impact. By advancing and supporting the validation, refinement, and more routine use of these evaluation methods and assessments to demonstrate health value, stakeholders can help reduce the uncertainty about their financial returns.

3. Implications for Investment and Portfolio Team and Governance

Our review of HV-ROI assessments also identified features of investment group and portfolio company leadership and governance that can help assure a consistent and meaningful focus on HV-ROI assessment.

Entrepreneurs, boards and advisors have critical roles in developing and sustaining the culture and operating model necessary to emphasize growth in HVM and financial value. Similarly, the composition and motivations of the investment group—and the key individual investors—can significantly impact the likelihood of generating health value. Our ongoing work will further explore the identifying key characteristics of these successful teams and syndicates, including the incentive structures, reporting models, and communities of practice that can be developed to increase their likelihood of success.

For example, predictors of company leaders' success in assessing and increasing health value may include demonstrated prior ability to scale and grow companies that demonstrated HV-ROI, and technical background related to health value as well as financial success. Leadership team skillset diversity and heterogeneity, a priority already for many investors, can also be an important contributor to the organization's ability to succeed in key dimensions of HV-ROI. Further, the leadership or founding team's lived experience with the health value problem they are aiming to solve, and their previous experience in demonstrating engagement with affected patients and providers, can also increase likelihood of success in improving health value.

In turn, the strategic priorities, composition, and governance of the investment team and its limited partners can affect the likelihood of health value impact as well as financial success. Increased [investor diversity](#) is associated with

better financial performance of investments and overall fund returns, and may improve health value returns as well. Investors with experience in delivering significant measurable health value as an executive or investor in the same or other areas of health care investment, or who have demonstrated a capacity for demonstrating impact on key value metrics in other relevant industries, can provide further assurance that the management team and the company will fulfill any planned commitments to increasing health value. For example, Echo Health Ventures adheres to a disciplined investment strategy that accelerates healthcare transformation through a dual mandate of financial returns and strategic engagement. EHV has a specific Echo Health Advisors team to foster collaboration, remove barriers, and drive solutions between portfolio companies and health plan stakeholders to increase value creation and overall impact. Strategic investors with such HV-ROI experience can strengthen a company's HV-ROI focus by participating in company governance.

Relevant structural features of an organization for considering health value impact include a strong chief medical officer role, and an explicit regulatory compliance function reporting directly to the CEO or senior management team. Finally, senior executive compensation plans can be linked over time to implementing and delivering on HV-KPIs as well as to financial performance.

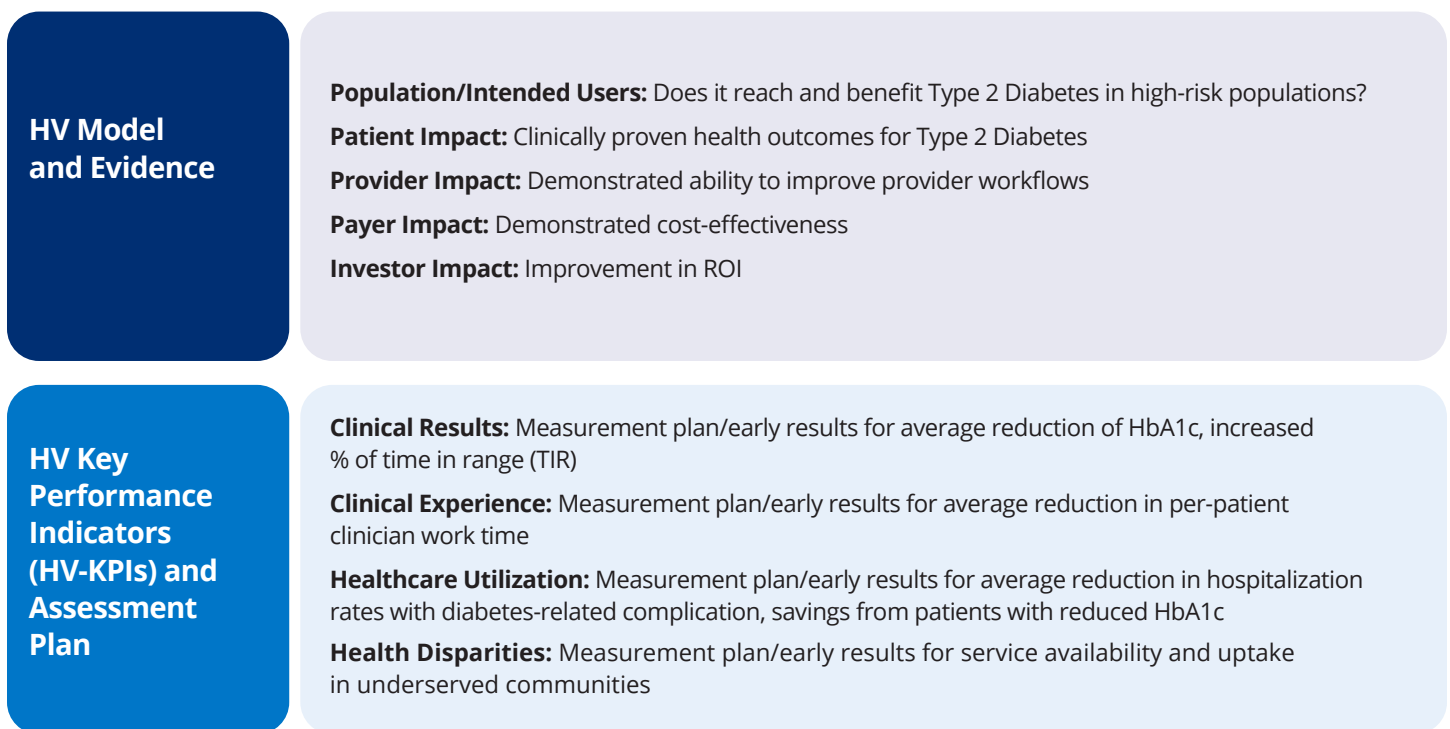
From General Framework to Practical Implementation and Impact

Applying the HV-ROI Framework described here to specific investments can be challenging, as only limited tools, standards, and supports are available today for HV-ROI assessment in particular contexts. Moreover, however

well-intentioned, companies going through downsizing or other responses to cash flow stresses will face strains in maintaining both their capabilities for improving health value and measuring their impact. Our review found many investors and company leaders who are engaged on these issues, in some cases implementing similar frameworks. We also found notable independent evaluation resources relevant to certain areas of health care investment. These building blocks provide a foundation for making routine HV-ROI assessment much more feasible.

Below, **Figure 3** illustrates an application of the Health Value Framework for investments to detect, treat, and potentially reverse Type 2 Diabetes, drawing on the PHTI Digital Health Evaluation for private diabetes management companies. In **Appendix C: Capital Impact Council: HV-ROI Case Studies**, we have provided initial case examples from our members committed to adopting the CIC HV-ROI Framework.

Figure 3 | Health Value Framework Illustrative Example: Type 2 Diabetes



Experience and track record in applying HV-ROI assessments in successful investments. History of scaling and growing companies with financial success and demonstrated HV-ROI. Process for linking compensation to HV-ROI

Other near-term opportunities for such focused development include private investment to support advanced, affordable primary care; rural health care access; informed consumers; cardiovascular care management; and addressing obesity and cardiometabolic syndrome. In each of these areas, existing initiatives can be refined and strengthened over time, through more concerted efforts to clarify how investors and others can most efficiently advance the development of needed evidence.

In particular, some investors and privately-backed health care companies routinely provide information to support a health value assessment with many of the elements we describe, and many more have implemented practices and provide information relevant to some of the assessment domains. A shared public commitment by investors and companies to apply the HV-ROI framework, perhaps starting with some key elements, could accelerate this progress.

To drive HV-ROI assessment in private investment, Capital Impact Council members commit to use this framework to inform their own investment decisions, and to contribute their expertise to the development and adoption of HV-ROI frameworks in leading areas where private-sector investment could have a significant impact on population health and health value. We hope other investors and companies will do so as well.

The Capital Impact Council also welcomes support from collaborating organizations willing to share their health value assessment strategies and experiences in their own investment decisions, adding to our ability to advance feasible and meaningful HV-ROI analysis.

While this will be a learning process with challenges along the way, more explicit commitments to HV-ROI assessments will help routinize these important considerations in private health care investment and provide valuable results, given the growing opportunities for private investment to advance better and more affordable health care.

Shared action can improve the limited infrastructure and high costs for conducting meaningful assessments so that the development of valid evidence on key indicators of health value is easier and faster. Promising examples of collaborative action exist here too, especially involving the private and public entities that would collectively benefit the most from better assessments. Collaborative actions by investors, potential users, and/or customers to refine standards and practical evidence development capabilities in key areas of health care investment could increase private investment that is likely to increase health value.

To help build the capacity to develop data and evidence for meaningful HV-ROI assessment, Capital Impact Council members will strengthen collaborations and partnerships with other stakeholders—in particular, interested payers, purchasers, and health care organizations—to advance standard approaches and platforms to lower the time and cost of developing valid data and reliable evidence. For example, early applications might include digital and AI programs and resources, including mechanisms for conducting and reporting evaluations, to complement PHTI assessment frameworks, to help payers develop more evidence-based “digital formularies,” or to help health care organizations make more confident choices about partners to improve their health value capabilities.

These activities could complement public initiatives to improve evidence and advance health value. For example, the Center for Medicare & Medicaid Services (CMS) Innovation Center conducts pilot evaluations of innovative payment and care models. CMS could support the development of standards and infrastructure to help participants in Medicare and multipayer value-based payment reforms conduct rapid or longer-term assessments of the impact of private-sector “enabling” tools and supports, focusing on key challenges and quality improvement opportunities identified by health care providers participating in CMS-supported learning networks.

Finally, these steps may make it easier to sustain independently funded organizations to guide and validate health value assessments, building on the approaches of such organizations included in our review. With more infrastructure support, assessment organizations could provide a well-defined and validated infrastructure for making transparent health value assessments routine – a potentially valuable step toward a sustainable health care system that uses private investment to make faster and more meaningful progress toward better health.

LOOKING AHEAD

We are at a critical point in realizing the promise of health care innovation to improve health care and health. The potential benefits and needs for private investment have never been greater, yet understandable concerns remain about whether private investment can consistently achieve health value returns alongside financial returns. With so much at stake for the future of health care, and with a promising foundation and unprecedented opportunities to accelerate progress, health care innovators and investors can build on the expanding efforts and capacity to increase health value impact assessments of their investments, and to strengthen the evidence on aligning health value and financial ROI. Considerable evidence of synergy exists, and our hypothesis is that further evidence will identify ways to better align the incentives of stakeholders for population health benefits. All have a role, from the Limited Partners and Corporations who fund investment organizations to the investors and company management, as well as the entrepreneurs, utilizers and adopters of health care innovation. By strengthening the integrated use of financial and health value assessment, we can help build a better health care system for the future and bridge the gaps that too often stand between the potential of health care innovations and outcomes.

Appendix A | Relevant Health Value Assessment Frameworks Reviewed

Modality	Endpoint	Reference
TPG/Y Analytics	Jan-2019	https://therisefund.com/measurement
Global Impact Investing Network	Jan-2019 Latest update Dec-2024	https://iris.thegiin.org/metrics
B-Corp	Jan-2006 Latest update May-2024	https://iris.thegiin.org/metrics
7Wire Ventures		Investment Impact Assessment Framework
Echo Health		Investment Impact Assessment Framework
Morgan Health		Investment Impact Assessment Framework
American Heart Association		Investment Impact Assessment Framework
Institute for Clinical and Economic Review	Sep-2023	https://icer.org/assessment/icer-phti-assessment-framework-for-digital-health-technologies/
Peterson Health Technology Institute	July-2023	https://phti.org/assessments/
AMA Return on Health	May-2021	https://www.ama-assn.org/system/files/2021-05/ama-return-on-health-report-may-2021.pdf

Appendix B | Summary Assessment of Existing Frameworks Mapped to HV ROI Framework Domains

Domain: Health Value Model & Evidence Review								
General Frameworks			Health-Sector Specific Frameworks				Application Specific Frameworks	
TPG-Y	GIIN	BCorp	Morgan Health	7-Wire Ventures	Echo Health	American Heart Association	Peterson Health Technology Institute	AMA Return on Health
<p>Relevance & Scale; How many people will the product or service reach, and how deep will its impact be?</p> <p>Adjust for Risk; Recognize the risk in applying findings from research that is not directly linked to a given investment opportunity.</p> <p>Estimate Economic Value of Outcomes to Society; When the target outcomes have been identified, social impact investors need to find an “anchor study” which will robustly translate the outcomes these companies produce into economic terms.</p>	<p>Who; Who experiences the effect and how underserved are they in relation to the outcome?</p> <p>How Much (Scale); How much of the effect occurs in the time period (number of stakeholders experiencing the outcome)</p> <p>Risk; Assessing the likelihood that impact will be different than expected.</p> <p>Contribution; How does the effect compare and contribute to what would likely occur anyway?</p> <p>Evidence (Nesta); How confident we can be in the evidence provided to show that an intervention is having a positive</p>	NA	<p>Impact; Demonstrated ability to improve outcomes and affordability.</p> <p>Patient Outcomes; Clinically proven – via peer-reviewed journals or third-party data – to improve outcomes</p>	NA	NA	<p>Impact: Does it reach and benefit under-resourced areas and populations?</p> <p>How: Community engagement, scalability and sustainability and equity-focused outcomes.</p> <p>What: Does this target systemic issues related to access to health care, food security, and economic stability?</p> <p>Evidence: Prioritize investments that demonstrate measurable improvements in addressing SDOH</p>	<p>Economic Impact; The budget impact analysis of a DHT estimates its incremental costs (positive or negative) versusits comparator in a stated population, from a stated perspective, and over a specified time horizon</p> <p>Clinical Impact (Safety and Effectiveness); Empirical data from users on perceived behavior change or health improvement, RCT demonstrating that use of the diagnostic DHT improves patient outcomes, clinical efficacy, etc.</p>	<p>Value Stream 5: Financial and Operational Impact; Health care organizations, such as hospitals/ health systems, clinician groups or independent practices, will be reluctant to adopt virtual care unless it is financially viable, and payers will be reluctant to pay for it unless it is cost-effective.</p>

Domain: Health Value KPIs & Assessment Plan

General Frameworks			Health-Sector Specific Frameworks				Application Specific Frameworks	
TPG-Y	GIIN	BCorp	Morgan Health	7-Wire Ventures	Echo Health	American Heart Association	Peterson Health Technology Institute	AMA Return on Health
<p>Target Social & Environmental Outcomes; Identifying the social or environmental outcomes –including positive and negative externalities – and determining whether existing research indicates that they are achievable and measurable</p>	<p>How Much (Depth); How much of the effect occurs in the time period (degree of change experienced)</p> <p>What; What outcomes the enterprise is contributing to and how important the outcomes are to stakeholders</p> <p>Evidence (Nesta); You have manuals, systems and procedures to ensure consistent replication and positive impact</p>	<p>Community; a company's engagement with and impact on the communities in which it operates, hires from, and sources from</p>	<p>Product Innovation; Product or solution is well-designed and mature – with a history of satisfying or retaining employer customers based on two-sided success or risk metrics. Additionally, patients can seamlessly access and engage with the product or solution.</p> <p>Patient Outcomes; improve outcomes (i.e., reduce disparities, increase engagement or strengthen access) and with demonstrated accountability to drive quality measures in direct contracts with providers, point solutions and carriers.</p>	<p>ROI; ROI is derived from examining medical cost reduction, financial returns, and improvements in relevant clinical outcomes</p>	<p>Affordability; demonstrating a proven and measurable financial impact to members and/or Alliance</p> <p>Quality & Outcomes; Positive efficiency, health improvement and clinical outcomes metrics, Positive industry rankings</p> <p>Experience; positive member and/or provider stories, reports</p>	<p>Health Care Access and Quality; Access to preventative care, health care service utilization, access to mental/behavioral health services, improvements in mental health, improvements in health literacy, patient satisfaction, etc.</p> <p>Economic Empowerment; Access to resources and social benefits, improvements in employment rates, job retention, income generation, housing stability, financial health, etc.</p> <p>Food Security; Local availability of healthy foods, access to healthy and affordable food, improvements in dietary behavior including fruit and vegetable consumption, etc.</p>	<p>Clinical Impact (User Experience); The ease and satisfaction with which end-users can use the DHT for its intended purpose.</p> <p>Clinical Impact (Safety and Effectiveness); Personalized health information for use by the end-user, diagnoses a specific clinical condition and/or guides diagnosis or management decisions through diagnosis or prognosis, preventative health behavior management with professional involvement.</p>	<p>Value Stream 1: Clinical Outcomes, Quality and Safety; Improvement of clinical outcomes, quality and safety is often the most important goal among clinicians who implement virtual care.</p> <p>Value Stream 2: Access to Care; Virtual care programs may reduce barriers that delay patients' access to timely care.</p> <p>Value Stream 3: Patient, Family and Caregiver Experience; Virtual care programs have the potential to enhance the overall care experience for patients as well as their families and caregivers.</p> <p>Value Stream 4: Clinician Experience; The adoption of virtual care can enhance the experience of clinicians and care teams by enabling them to connect and care for patients more easily, allowing for more flexible work schedules and helping clinicians connect more quickly and easily with their colleagues.</p>

Domain: Team and Governance

General Frameworks			Health-Sector Specific Frameworks				Application Specific Frameworks	
TPG-Y	GIIN	BCorp	Morgan Health	7-Wire Ventures	Echo Health	American Heart Association	Peterson Health Technology Institute	AMA Return on Health
NA	NA	<p>Governance; Evaluates a company's overall mission, engagement around its social/ environmental impact, ethics, and transparency</p>	<p>Leadership; A talented, diverse and highly integrated management team with a history of scaling and growing portfolios or companies throughout their career</p>	<p>Founder Market Fit; Connection to the Problem: Does the founding team / leadership deeply understand the problem and market? Domain Expertise & Drive: Does management bring deep domain expertise about the industry, the product, or both</p>		<p>Capacity of Management Team: Do they possess the capacity to execute vision/ mission? Skills/ experience speak to ability to scale and manage core elements of business? Understand opportunities for growth?</p> <p>Connections to Community/ Issue: Does the team have lived experience with the SDOH challenge? What about the team gives this organization a unique industry advantage?</p> <p>Depth of Advisory Team: assess key person risk and level set with size/stage of org.</p> <p>Coachability: does leadership have a growth mindset? Are they flexible and willing to seek and accept feedback?</p>	NA	NA

Appendix C | Capital Impact Council: HV-ROI Case Studies

These case studies demonstrate examples of how the key elements of the HV-ROI Framework, HV Model and Evidence as well as HV-KPIs, are already being implemented in private investments in health care. Provided by our 2024 Capital Impact Council members committed to adopting the HV-ROI Framework, these examples highlight the Capital Impact Council's aim to develop and share resources to support alignment in investor and health system incentives, and advance the positive impacts of private investment in health care.

Through sharing and developing case examples, tools, metrics and analyses, we aim to strengthen and expand the use of effective health value assessments to increase the positive impact of private capital investments for patients, health care professionals, communities, entrepreneurs and investors and advance a repeatable, evolving model for this work.

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Health Value Return on Investment

Attane Health

Attane Health is a patient-driven digital marketplace providing high-quality foods, nutrition coaching and data to improve food access and health outcomes for patients at risk of developing or who have already developed chronic illnesses.

attanehealth™
PERSONALIZED FOOD & NUTRITION CARE



American Heart Association
Ventures

HEALTH VALUE (HV) MODEL

Population: Currently, as many as 47% of Medicaid members experience food insecurity.² Additionally, 6 out of every 10 adults in the US have at least one chronic illnesses.¹

Patient Outcomes: Poor nutrition is a major risk factor for chronic conditions such as obesity, diabetes and hypertension.⁴

Community Impact: Improvement in outcomes for vulnerable populations through increasing access to food and healthy eating practices.⁵

Cost Impact: Improved nutrition (also known as Food as Medicine) reduces health care costs for underserved and marginalized populations.⁶

HV-KEY PERFORMANCE INDICATORS

- **Key Clinical Results:** 70% of Attane Health users with diabetes experience reduction in blood pressure.³
- **Patient Experience:** 90% of users who had health coaching reported “significantly improved” health management.³ 74% of all Attane users report reduced blood pressure.³
- **Community Well-Being:** Traction in 29 states with food delivery access in urban, suburban and rural areas working with underserved populations.³
- **Health Plan Retention:** 89% of users are likely to re-enroll in their health plans after using Attane.³

Information provided by portfolio company has not been independently verified.

Sources: 1. Centers for Disease Control and Prevention (CDC). 2020. “Economic Security During the COVID-19 Pandemic.” NIOSH Science Blog. <https://blogs.cdc.gov/niosh-science-blog/2020/06/22/economic-security-covid-19/>; 2. Springer. 2023. “Prevalence of Chronic Illness Among U.S. Adults.” Journal of General Internal Medicine. <https://link.springer.com/content/pdf/10.1186/s12912-023-01296-8.pdf>; 3. Attane Health. 2024. Internal Report on Healthcare Insights. 4. Centers for Disease Control and Prevention. 2024. “About Chronic Diseases.” <https://www.cdc.gov/chronic-disease/about/index.html>. 5. National Institute on Minority Health and Health Disparities. 2024. “Food Accessibility, Insecurity, and Health Outcomes.” <https://www.nimhd.nih.gov/resources/understanding-health-disparities/food-accessibility-insecurity-and-health-outcomes.html>; 6. National Institutes of Health. “Prescribing Healthy Foods Could Bring Cost-Effective Benefits.” NIH Research Matters, April 2, 2019. <https://www.nih.gov/news-events/nih-research-matters/prescribing-healthy-foods-could-bring-cost-effective-benefits>.



Health Value Return on Investment

Pear Suite

Pear Suite is a digital platform and tech-enabled service provider that builds workflows for frontline Community Health Workers to operate more efficiently and effectively to generate long-term positive health outcomes for their payers and health systems.



HEALTH VALUE (HV) MODEL

Target Population: Pear Suite is designed to support the growing number of frontline CHWs by streamlining their workflows and improving efficiency. There are approximately 70,000 community health workers (CHWs) in the U.S. today, and their numbers are projected to grow 13% by 2033.¹

Access to Care: Improved access to care for underserved populations.

Patient Outcomes: Patients benefit from early interventions, proactive health management, and connections to resources that address SDoH.

Provider Impact: Increased provider efficiency and workforce support.

HV-KEY PERFORMANCE INDICATORS

- **Community Impact:** Impacting over 100,000 lives, collaborating with 175 community organizations and 750 CHWs.^{2,3}
- **Health Equity:** Offered in 9+ languages, across 24 states bridging gaps in care for historically underserved populations.⁴
- **Patient Engagement:** 85% engagement rates through its person-centered approach, 78% social needs addressed.³
- **CHW Key Results:** 98% partner retention rate, 3x increase in closing care gaps, 200% increase on claims.⁴

Information provided by portfolio company has not been independently verified.

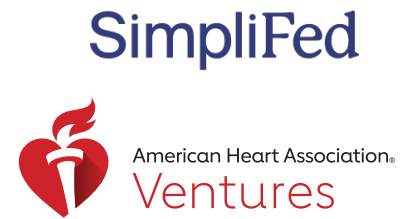
Sources: 1. U.S. Bureau of Labor Statistics. "Community Health Workers." Occupational Outlook Handbook. Last modified May 2023. <https://www.bls.gov/ooh/community-and-social-service/community-health-workers.htm>; 2. Pear Suite. "Digital Health Company Pear Suite Hits 100-Customer Milestone." Pear Suite Blog, June 24, 2024. <https://www.pearsuite.com/post/digital-health-company-pear-suite-hits-100-customer-milestone/>; 3. Pear Suite. Pear Suite Webpage. Accessed March 5, 2025. <https://www.pearsuite.com/>; 4. Self-reported by Pear Suite



Health Value Return on Investment

SimpliFed

SimpliFed is a maternal health-tech company providing virtual peri- and post-natal lactation and baby feeding support alongside remote patient monitoring for high-risk conditions such as hypertension and gestational diabetes.



HEALTH VALUE (HV) MODEL

Population: 70% of mothers in the U.S. will breastfeed for some period and more than 2.2M women of child-bearing age live in maternity care deserts.^{1,2}

Patient Outcomes: Improved access to quality maternity care can decrease the risk of maternal mortality for those living in maternity care deserts, women with lower-income and minority women.²

Provider Impact: It is projected by 2030 that there will be a shortage of around 5,170 obstetricians to meet demand nationally.²

HV-KEY PERFORMANCE INDICATORS

- **Key Clinical Results:** 87% of patients feed with breast milk for at least 3 months, compared to 69% national average.³
- **Patient Experience:** 96% NPS Score and 97% of SimpliFed Patients report feeling less stressed after using SimpliFed.³
- **Missed Appointment Rate:** 2% patient no-show rate.³
- **ER Utilization:** 2.6% ER utilization rate, compared to 7.6% national average.³

Information provided by portfolio company has not been independently verified.

Sources: 1. Geraghty, Sheela R., Sarah W. Riddle, and Ulfat Shaikh. "The Breastfeeding Mother and the Pediatrician." *Journal of Human Lactation* 24, no. 3 (2008): 335–339. <https://doi.org/10.1177/0890334408321091>; 2. March of Dimes. 2020 Annual Report and Financials. October 2022. https://www.marchofdimes.org/sites/default/files/2022-10/2020_Annual_Report_Financials.pdf; 3. Simplified. 2024. "Simplified." <https://www.simplified.com/>.



Health Value Return on Investment

Sober Sidekick App

Sober Sidekick (“SSK”) is a digital health engagement company for people with substance use disorder (SUD). The company powers peer-based engagement in a community-driven behavioral change model.



HEALTH VALUE (HV) MODEL

Target Population: 48.5M U.S. patients suffered from a substance use disorder (SUD) in the past year.¹ 85% relapse rate within one year of treatment nationally.²

Patient Impact: Increased access to peer support, improved relapse prevention and better long-term outcomes.^{6,7}

Cost Impact: Lower health care costs due to reduced SUD relapse rates.⁵

HV-KEY PERFORMANCE INDICATORS

- **Key Clinical Results:** One peer-to-peer interaction cuts relapse rates by 48.2%.³
- **Patient Experience:** Half a million members; 100% peer response rate within minutes, 4.8/5 app store rating.⁴
- **Total Cost of Care:** Reduced relapse creates an est. \$7,959 savings per actively engaged member to the health system.³

Information provided by portfolio company has not been independently verified.

Sources: 1. Substance Abuse and Mental Health Services Administration. “National Survey on Drug Use and Health.” Last modified November 13, 2023. <https://www.samhsa.gov/data/>; 2. Brandon, Thomas H., Jennifer I. Vidrine, and Ellen B. Litvin. “Relapse and Relapse Prevention.” Annual Review of Clinical Psychology 3 (2007): 257–84. <https://doi.org/10.1146/annurev.clinpsy.3.022806.091455>; 3. Sobersidekick. “Sobersidekick: Your Companion in Recovery.” Accessed March 5, 2025. https://www.sobersidekick.com/_files/ugd/01129f_af3b67aaf1cc41deab4dd02d3df5d315.pdf; 4. Self-Reported by Sober Sidekick; 5. Etner, S., Huang, D., Evans, E., Ash, D. R., Hardy, M., Jourabchi, M., & Yih-Ing, H. (2006) Benefit-Cost in the California Treatment Outcome Project: Does Substance Abuse Treatment “Pay for Itself”? Health Services Research. 41(1): 192–213. doi: 10.1111/j.1475-6773.2005.00466.; 6. Tracy, Kathlene, and Samantha P. Wallace. “Benefits of Peer Support Groups in the Treatment of Addiction.” Substance Abuse and Rehabilitation 7 (2016): 143–154. <https://doi.org/10.2147/SAR.S81535>; 7. Scannell, Christian. “Voices of Hope: Substance Use Peer Support in a System of Care.” Substance Abuse: Research and Treatment 15 (2021): 11782218211050360. <https://doi.org/10.1177/11782218211050360>.



Health Value Return on Investment

Cylinder Health

Cylinder Health provides personalized gastrointestinal care, improving outcomes and reducing cost.

Cylinder



HEALTH VALUE (HV) MODEL

Target Population: 40% of individuals experience gastrointestinal issues daily, including conditions such as Crohn's disease, Ulcerative Colitis, Irritable Bowel Syndrome, Celiac Disease, and acid reflux (GERD).¹

Community Impact: Socially vulnerable populations, including those with lower socioeconomic status and minority groups, typically have less access to quality GI care.^{2,3}

Patient Outcomes: Improvement in GI symptoms, member satisfaction, medication adherence and decreased absenteeism.¹

Provider Impact: Improvement in care team coordination and satisfaction, the prevalence of burnout in dietitians and nutritionists is 40% as well as 37% of gastroenterologists reported burnout.^{4,5}

Cost Impact: Reduction in total health care spend, including reduced ER admits, inpatient admissions and duplicative doctor visits.¹

HV-KEY PERFORMANCE INDICATORS

- **Patient Experience:** 83% of users reported feeling more in control of their health, with African American users (92%) and women (86%) reporting the highest improvement¹
 - 76% of users reported feeling happier¹
- **Key Clinical Results: 91% of patients report improved GI symptoms¹**
 - 83% of users reported better symptom management¹
 - Severe symptom prevalence decreased from 80% to 48% post intervention²
- **Provider/Patient Engagement:** ~18% increase in dietitian / patient interactions compared to a typical practice¹
- **Provider Experience:** 89% care team satisfaction¹
- **Employee Engagement:** 13% of employees reached (vs 5% with other chronic care services)¹
- **Employer Savings:** 65%+ decrease in ER costs¹
 - \$2,000 PMPY medical savings¹
 - 5:1 ROI¹

Sources: 1. Cylinder. n.d. Cylinder Website & Cylinder Case Studies. <https://cylinderhealth.com/>; 2. Agency for Toxic Substances and Disease Registry. 2023. "Overall Social Vulnerability." Agency for Toxic Substances and Disease Registry. Accessed February 28, 2025. <https://www.atsdr.cdc.gov/placeandhealth/svi/overall-social-vulnerability.html>; 3. BMJ Open Gastroenterology. 2024. "BMJ Open Gastroenterology 11, e001463." <https://doi.org/10.1136/bmjgast-2024-001463>; 4. National Library of Medicine. n.d. "Article from PMC11667849." Accessed February 28, 2025. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11667849/>; 5. National Library of Medicine. n.d. "Article from PMC7435002." Accessed February 28, 2025. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7435002/>.



Health Value Return on Investment

dispatchhealth

DispatchHealth

Dispatch delivers on-demand health care to patients in the comfort of their own home, reducing unnecessary ER visits and hospital readmissions. Dispatch's system of care includes in-home ER-level medical care, advanced/hospital alternative care, and recovery/bridge care.



HEALTH VALUE (HV) MODEL

Population: Medically complex patients, frequent ER/hospital utilizers; often Medicare or MA eligible; over half are typically homebound. In 2019, >800k Medicare hospitalizations could have qualified for hospital-at-home.¹

Patient Impact: In-home services lower mortality rates, fall risk, and the onset of delirium.^{1,2} The Dispatch system of care allows members to remain in their homes, avoid hospitalizations that may come with complications, and maintain quality of life as defined by member goals.

Payer Impact: Shifting site of service enables patients to remain in their homes, even for acute and inpatient interventions, which would traditionally be delivered in the ER or inpatient setting. This reduces health care spend for payers.³

HV-KEY PERFORMANCE INDICATORS

- **Member Satisfaction/Net Promoter Score (NPS)** (scale of 100): Across markets, Dispatch achieves a typical NPS of 97-98.⁴ Results from Dispatch's work with a regional Blue plan showed an NPS of 95 among members who received acute care and 97 among those who received Recovery Care.⁴
- **Hospital Readmission Rate:** A regional Blue plan saw a 49% reduction in readmission rate and 53% improvement in 30-day hospital readmissions among members who received Dispatch's Recovery/Bridge Care solution.⁵
- **ER, Ambulance, and Hospital Diversion Rate:** Across markets, Dispatch Acute Care visits divert patients from the ER 58% of time, from an ambulance 20% of time, and hospital admission 3% of time.⁵ Advanced Care visits lead to a 30-day hospital readmit rate of 8.5% (the national average is 20%).⁵
- **Savings per Diverted ER Visit and Hospital Readmissions:** Across markets, Dispatch sees medical cost savings of \$1,625 per Acute Care visit and \$5-7k per Advanced Care visit. Total Acute Care and Advanced Care savings amount to \$1.5B across all markets.⁴ Dispatch's work with a regional Blue plan saved \$1,700 per diverted ER visit and \$30,000 per avoided hospital readmission, or ~\$3M in total savings.⁵

**Echo Health Ventures uses a strategic engagement model to establish and improve partnerships between its health plan stakeholders and portfolio companies. Echo believes its involvement in expanding Dispatch's contract with the regional Blue plan mentioned above helped contribute to the KPI results and Dispatch's overall impact.*

Sources: 1. Laurila, Jaakko V., Raimo O. Pitkala, Harriet Strandberg, and Timo E. Tilvis. 2009. "Delirium in Elderly Home-Treated Patients: A Prospective Study with 6-Month Follow-Up." *BMC Geriatrics*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC2693729/>; 2. Stuck, Andreas E., Juerg C. Egger, Gerhard Hammer, Christa M. Minder, and John C. Beck. 2015. "Preventive Home Visits for Mortality, Morbidity, and Institutionalization in Older Adults: A Systematic Review." *BMC Public Health*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3951196/>; 3. Smith, Adam C., and Jonathan P. Jones. 2017. "Innovative Home Visit Model Associated with Reduction in Costs, Hospitalizations, and ED Use." *Journal of the American Geriatrics Society*. <https://pubmed.ncbi.nlm.nih.gov/28264943/>; 4. Dispatch Analytics Department. 2024. Internal Report on Home Healthcare Data; 5. Regional Blue Health Plan. 2024. Health Plan Data Report.



Health Value Return on Investment

Strive Health

Strive is a leading provider of value-based kidney care. It aims to improve outcomes for patients with chronic kidney disease (CKD) and end-stage kidney disease (ESKD) by lowering the total cost of care through its high touch, technology-enabled care model that addresses comorbidities and delays disease progression.

strive



HEALTH VALUE (HV) MODEL

Target Population: Kidney disease affects ~37M people in the U.S. and is more common in people >65 years and those with diabetes and high blood pressure, which cause 45% and 28%, respectively, of kidney disease cases.^{1,6}

Patient Impact: About 90% of people with CKD do not realize they have the disease until the condition reaches late-stage or end-stage kidney disease (ESKD), and those with CKD or ESKD carry a disproportionate burden of cardiovascular morbidity/mortality, and health care utilization and costs.^{1,2}

Strive Health's care model engages and educates patients at the highest risk, brings care to preferred settings, and manages the care continuum. Strive treats the whole person and keeps patients on the ideal care journey, while slowing down overall kidney disease progression.

Payer Impact: Over \$100B in annual Medicare spend on kidney disease patients, with costs to U.S. health plans increasing exponentially as CKD progresses.^{3,4,8} Strive saves money for payers by lowering the total cost of care (TCOC) via overall improved quality of care, a reduction in hospital admissions and an increase in optimal dialysis starts.

HV-KEY PERFORMANCE INDICATORS

- **Member Satisfaction/Net Promoter Score (scale of 100):** Strive's average patient satisfaction score is 94%.⁷
- **Optimal Start Rate:** 67% increase in rate of optimal starts (includes preemptive kidney transplant or initiation of dialysis), compared to unenrolled patients in Strive markets.⁵
- **30-day Hospital Readmission Rate:** 36% reduction in Strive patient readmission rate, compared to historical benchmark.⁵
- **Hospitalization Rate:** 49% reduction in hospitalizations among high-risk Strive patients, compared to historical benchmark.⁵
- **ER Diversion Rate:** 10% reduction in ED visits, compared to initial baseline.⁷
- **Nephrology Visits:** 31% increase in visits, compared to initial baseline.⁷
- **Total Cost of Care:** Strive national results show a reduction in Total Cost of Care by 20%.⁵

* Echo Health Ventures uses a strategic engagement model to establish and improve partnerships between its health plan stakeholders and portfolio companies. In addition to supporting Strive's partnerships with regional Blue plans in our Alliance, Echo was at the table to support the creation of Strive in 2018. We partnered with the founders to transform the company from a concept to a leading kidney care solutions company.

Sources: 1. American Heart Association. 2020. "Cardiovascular Disease in Chronic Kidney Disease." *Circulation*. <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.120.050686>; 2. Jha, Vivekanand, and Geoffrey A. Block. 2023. "Global Economic Burden Associated with Chronic Kidney Disease." *International Journal of Nephrology and Renovascular Disease*. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10499937/>; 3. American Journal of Managed Care. 2023. "Medical Costs for Managing Chronic Kidney Disease and Related Complications in Patients with Chronic Kidney Disease and Type 2 Diabetes." *AJMC*. <https://www.ajmc.com/view/medical-costs-for-managing-chronic-kidney-disease-and-related-complications-in-patients-with-chronic-kidney-disease-and-type-2-diabetes>; 4. National Kidney Foundation. 2023. "Federal Investment in Kidney Disease Research and Care." National Kidney Foundation. <https://www.kidney.org/get-involved/advocate/legislative-priorities/federal-investment>; 5. Strive Health. "Strive Metrics: Analysis Details." Strive Health. Accessed March 5, 2025. <https://strivehealth.com/strive-metrics/>; 6. National Kidney Foundation. "Diabetes and Chronic Kidney Disease." National Institute of Diabetes and Digestive and Kidney Diseases. "Kidney Disease Statistics for the United States." National Institute of Diabetes and Digestive and Kidney Diseases. Accessed March 5, 2025. <https://www.niddk.nih.gov/health-information/health-statistics/kidney-disease>; 7. Strive Health. "Strive Media Kit" Strive Health. Accessed March 11, 2025. https://strivehealth.com/wp-content/uploads/2024/10/MediaKit_Q42024_v2.pdf; 8. CDC. "Chronic Kidney Disease: Common, Serious, and Costly." CDC.gov. Accessed March 11, 2025. <https://www.cdc.gov/kidney-disease/ckd-facts/index.html>.



Health Value Return on Investment

Amae Health

Amae Health, a psychiatry-led integrated care provider of outpatient physical and behavioral health services for people living with a severe mental illness (SMI). Amae Health's mission is to create the center of excellence for patients with severe mental illness.



HEALTH VALUE (HV) MODEL

Population: 15M adults in the US suffer from Severe Mental Illness (SMI)¹. These individuals have a 10-20 year reduction in life expectancy and 50% of people with SMI suffer from substance abuse.^{2,4}

Patient Impact: Current standard of care for SMI leads to 23% 30-day ER readmissions, 15-day average length of stay (LOS) post readmission, and only 53% medication adherence.

Cost Impact: SMI accounts for over \$300Bn in costs in the US annually.²

HV-KEY PERFORMANCE INDICATORS

- **Patient Engagement:** Amae Health's clinical model delivers intensive outpatient SMI care under an integrated model with psychiatric, medical, social and medication needs addressed cohesively. Patients have an 80% engagement with Amae, compared to the standard of care of 30%.³
- **ER Readmissions:** Amae's model enables up to 83% reductions in 30-day ER readmission. Amae's in-network model (inclusive of Medicaid plans) model has proven to reduce 30-day ER readmissions from 23% down to 4%, leading to Total Cost of Care reductions.³
- **Key Clinical Results:** 60% increase in medication adherence and 50% reduction in key SMI symptoms—including 49% reduction in suicidality, 61% reduction in psychosis, and 76% reduction in mania over 24 weeks.³

Sources: 1. National Institute of Mental Health. "Mental Illness." National Institute of Mental Health. Accessed March 5, 2025. <https://www.nimh.nih.gov/health/statistics/mental-illness>. 2. American Addiction Centers. "The Long-Term Effects of Drug Abuse." American Addiction Centers. Accessed March 5, 2025. <https://americanaddictioncenters.org/blog/long-term-effects-drug-abuse>. 3. Amae Health Internal Data. 4. Drake, Robert E., Kim T. Mueser, and Mary F. Brunette. "Management of Persons with Co-Occurring Severe Mental Illness and Substance Use Disorder: Program Implications." *World Psychiatry* 6, no. 3 (2007): 131–136. <https://pmc.ncbi.nlm.nih.gov/articles/PMC2174596/>.



Health Value Return on Investment



WelbeHealth

WelbeHealth, a Temasek portfolio company, provides full-service healthcare and personalized support to help seniors age at home and in their communities through the Program for All-inclusive Care for the Elderly (PACE). PACE provides fully integrated, community-based care for medically complex adults 55 and older who need nursing home level care.

HEALTH VALUE (HV) MODEL

Population: ~1.4M seniors in CA are eligible for a PACE program.¹ PACE enrollment has increased by 50% since 2019.² Californians make up 30% of national PACE enrollment as of June 2024 and the largest growth in PACE is in CA where Welbe is headquartered.² In 2023, Los Angeles had the largest PACE population of any county in the US.³

Patient Impact: Despite high care needs, over 90% of PACE participants continue to live in their community with a good quality of life for up to 4 years.⁴ PACE is associated with lower hospitalization rates, shorter lengths of stay in hospitals (<6 days), reduced caregiver burden, and a higher quality of life compared to other programs.⁴ Data also shows that PACE participants are significantly less likely to use emergency department care or be institutionalized than Medicare Advantage enrollees.⁵

Financial Impact: PACE is lower cost compared to nursing home care. PACE organizations like WelbeHealth reduce preventable hospitalizations and save money compared to costly long-term nursing care and comparable government funded programs (Medicare/Medicaid). The average cost for a PACE program is 12% percent less/person/month than the costs the state Medicaid programs otherwise would incur.⁶ In 2024, CA paid approximately \$370M less than it would have if all PACE participants were served outside of PACE.⁷ We can assume Welbe is a significant portion of those savings as the 2nd largest PACE Organization in CA.

HV-KEY PERFORMANCE INDICATORS

- **Member Satisfaction:** PACE participants are highly satisfied and feel uniquely cared for. 92% of PACE participants are very satisfied with their care and would recommend PACE to friends/relatives, and 95% of caregivers would recommend PACE.⁷ In 2024, 94% of Welbe participants report improved quality of life under Welbe's care, according to 3rd party survey (I-SAT) data.⁹
- **Hospital Readmission Rate:** Welbe's care model effectively reduces avoidable emergency room visits and inpatient admissions. In 2024, admissions per thousand improved by 9%, while ER visits per thousand saw a 14% improvement.⁹
- **Health Outcomes:** In 2024, 82% of Welbe participants with diabetes had a most recent HbA1c level of $\leq 9\%$, achieving a performance level equivalent to a Medicare Advantage 4-star rating.⁸ 73% of Welbe participants maintained or improved their frailty status in 2024, demonstrating success in preserving functional independence.⁹
- **Advanced Care Planning:** Ensuring that participants' medical decisions align with their personal goals is a priority. In 2024, 99% of Welbe participants engaged in an advance care planning discussion, and 96% had a completed POLST or Advanced Directive.⁹

Sources: 1. California Department of Health Care Services, "Program of All-Inclusive Care for the Elderly (PACE)," 2. ATI Advisory, "A Look at PACE Growth by the Numbers: States, Organizations, and Enrollment," July 2024. 3. Skopec, Laura, "The Program of All-Inclusive Care for the Elderly (PACE) Payment System," Urban Institute, June 2024; 4 National Library of Medicine, Program of All-Inclusive Care for the Elderly (PACE), StatPearls, accessed March 12, 2025; 5 Harootunian, Lisa, Allison Buffett, Brian O'Gara, Kamryn Perry, Marilyn Werber Serafini, and G. William Hoagland, "Improving Access to and Enrollment in Programs of All-Inclusive Care for the Elderly (PACE)," Bipartisan Policy Center, October 4, 2022. Accessed March 12, 2025. <https://bipartisanpolicy.org/report/improving-pace/>; 6. National PACE Association, "2023 PACE Rates and Trends in Medicaid Payments," December 6, 2023; 7. California PACE Association, "Home Care Assistance & Senior Care Services," <https://calpace.org/>. 8. Centers for Medicare & Medicaid Services, "Quality ID #1 (CBE 0059): Diabetes: Hemoglobin A1c (HbA1c) Poor Control (>9%)," December 2023. 9. Reported by Welbe Health

