

COMMENTARY

Kaiser Permanente: Highlights of an integrated care delivery system

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INTRODUCTION

Globally, health care systems are facing challenges related to higher costs, workforce shortages, rapidly changing technology, and increase burden of disease. Although the US has the most expensive system in the world, Kaiser Permanente and its integrated care and coverage model show the potential for health care systems around the world to provide valuable, convenient, and affordable care.

At its core, Kaiser Permanente's structure facilitates coordinated care and creates incentives that lead to effective and efficient health care. Kaiser Permanente is the largest private integrated healthcare system in the United States serving 12.5 million members in eight markets. See Figure 1. Kaiser Permanente is comprised of Kaiser Foundation Health Plan, Kaiser Foundation Hospitals, and The Permanente Medical Groups (self-governed groups in each of our eight markets).

KEY DISTINGUISHING ASPECTS OF KAISER PERMANENTE'S INTEGRATED CARE DELIVERY SYSTEM

1. Members (patients) prepay for their health care. Prepayment provides incentives for Kaiser Permanente and its members to engage in preventive care and to effectively manage both acute and chronic conditions, while providing financial stability.
2. Focus on individual and population health. When members join Kaiser Permanente, they connect with a primary care physician/general practitioner. The primary care physician supports patients through

prevention and management of ongoing conditions. The primary care physician partners with care team members who support population health programs, designed to provide the best care for specific conditions and populations, while tailoring to each patients' needs.

3. Doctors receive a salary. Doctors determine what care is needed and set the standards for clinical protocols. There is no financial incentive to do more than what is necessary.
4. Hospitals are a cost center. Kaiser Permanente care teams and operations leaders work to ensure patients are only in the hospital as necessary, and transition to other venues of care to support healthy recovery.
5. Integration through technology. The electronic medical record connects all Kaiser Permanente care teams across the continuum of health care. This enables the entire care team to know the patients and assist them in obtaining the prevention and care resources that support total health. The integrated data for each member enables Kaiser Permanente to learn from our clinical practice and continually practice evidence-based medicine. With our data, we identify health disparities between different patient populations and work towards solutions that eliminate these disparities. Technology has also enabled convenient options for care delivery, including video visits, remote monitoring, and mobile apps that enable scheduling of appointments, ordering prescription refills, and viewing lab results.


These five aspects increase convenience, quality, and affordability for members. Doctors spend time caring for patients, not handling insurance approvals and

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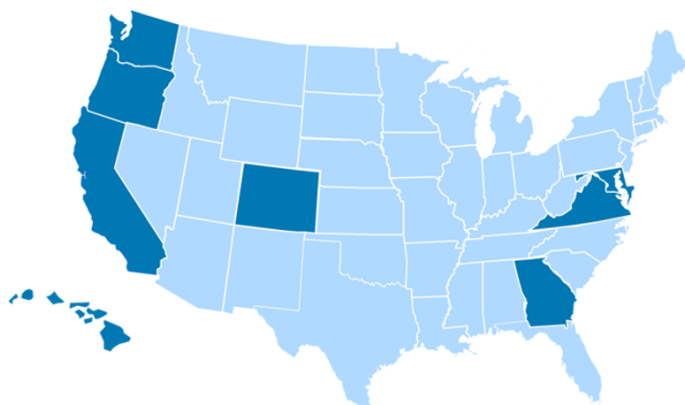
Received: 13 March 2024; Revised: 27 September 2024; Accepted: 1 November 2024

<https://doi.org/10.54844/hamp.2024.0046>

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Kaiser Permanente by the numbers

Mission: To provide affordable high-quality health care services and to improve the health of our members and the communities we serve.



12.5
million members (2023)



24,605
physicians



73,618
nurses



216,000
employees



618
medical facilities



40
hospitals

Figure 1. Kaiser Permanente by the numbers. Available from: <https://about.kaiserpermanente.org/who-we-are/fast-facts>, accessed February 14, 2024.

claims. Hospitals focus on enabling the right care at the right time. And a strong mission aligns all of Kaiser Permanente around a focus on providing quality and affordable health care to members and communities.

IMPACT OF KAISER PERMANENTE'S INTEGRATED SYSTEM

Early warning system for hospitalized patients

The Kaiser Permanente Division of Research led the development of the Advance Alert Monitor (AAM) that provides early indication that a hospitalized patient might experience a decline in health status. The researchers used data from 1.5 million Kaiser Permanente patients to develop a severity score that is coupled with real-time patient data to quantify risk of rapid deterioration. Our integrated system enabled the establishment of an efficient workflow to manage the alerts as they are generated. Highly trained nurses from a virtual quality team review the alerts for patients in up to five Kaiser Permanente hospitals. The nurses then work with the rapid response team at the patient bedside to adjust the patient's care plan to reduce the risk of deterioration. A study published in the *New England Journal of Medicine* found that AAM was responsible for preventing 520 deaths per year, in addition to reducing ICU admissions and length of hospital stays. This new

clinical practice leverages our extensive data, our connected healthcare system, and team-based care to lead to better clinical outcomes for our patients.^[1]

Lower risk of premature death

Kaiser Permanente leads the United States in cancer screening. And while detecting cancer early can lead to better outcomes, a recent study from our Southern California region in *The American Surgeon* shows that across cancer stages, Kaiser Permanente patients with colon cancer had better outcomes, including a 25% lower mortality rate compared to other insured patients. Aspects of integrated care that support our approach to cancer care include standardized electronic health records, emphasis on adherence to national clinical guidelines on cancer treatments, and care coordination across all medical departments. This study also noted that while in the United States, higher socioeconomic status leads to better outcomes, at Kaiser Permanente Southern California, there were no disparities related to socioeconomic status.^[2]

Reduced post-surgical complications

Around 25% of all surgery patients across the United States suffer postoperative complications. Kaiser Permanente physicians in Northern California wanted to reduce these complications and decided to develop a protocol using the Enhanced Recovery After Surgery

(ERAS) protocol.^[3] This was initially developed in Northern Europe, and features a team-based approach used before, during, and after surgery. While this has been used for more than two decades, and has been shown to reduce hospital stays, Kaiser Permanente wanted to evaluate whether this protocol could reduce complications such as cardiac, pulmonary, and neurologic problems. Key components of the protocol are encouraging patients to eat food 8-12 hours before surgery and provide a high carbohydrate drink a few hours before surgery, as opposed to fasting.^[4] The care team uses non-opioid pain relievers and encourage patients to walk within 12 hours of surgery. They also work to lessen patients' anxiety by providing clear information about the surgery and recovery and encourage active participation in recovery.

Results from the study showed a decrease in opioid prescribing rates of 21% and early mobility, which helps prevent blood clotting and pneumonia, increased 34% for colorectal resection patients and 18% for hip fracture patients. These results were enabled by implementing clear clinical pathways that guide care teams and patients through preoperative planning, surgery, and recovery.^[5]

Kaiser Permanente continues to evolve and innovate to respond to the dynamic nature of providing healthcare. As we face the systemic healthcare challenges experienced by many, our approach to integrated and value-based care provides a solid foundation to continue to improve outcomes and patient experience, reduce costs, and drive towards more equitable care.

DECLARATIONS

Author contributions

Karin Cooke solely contributed to this commentary.

Conflict of interest

The authors have no conflicts of interest to disclose.

Data sharing statement

No additional data is available.

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