



HIMSS Analytics

HIMSS Analytics Stage 7 Case Study

Kaiser Permanente

Profile

Kaiser Permanente is an integrated health care delivery system comprised of Kaiser Foundation Hospitals, Kaiser Foundation Health Plan, and physicians in the Permanente Medical Groups. Today we serve more than 9.6 million members in eight states and the District of Columbia. Our mission is to provide high-quality, affordable health care services and to improve the health of our members and the communities we serve.

Care for members and patients is focused on their total health and guided by their personal physicians, specialists, and team of caregivers. Our expert and caring medical teams are empowered and supported by industry-leading technology advances and tools for health promotion, disease prevention, state-of-the-art care delivery, and world-class chronic disease management. Kaiser Permanente is dedicated to care innovations, clinical research, health education, and the support of community health.

Kaiser Permanente includes over 17,400 physicians and 174,000⁺ staff who work in or provide support to 38 hospital medical centers, and hundreds of medical office complexes, laboratories, pharmacies, call centers and dental offices.

All eligible Kaiser Permanente ambulatory sites (350) were validated as HIMSS Analytics EMR Adoption ModelSM Stage 7 as of January 14, 2015.

The Challenge

Outpatient safety is relatively uncharted territory in the healthcare industry. Patient safety efforts have traditionally focused on the inpatient setting, where risks are more readily identified. Outpatient safety risks are less obvious. If an error occurs in the outpatient setting, it may take an extended period of time before it is recognized or has an effect on the patient. All those who receive outpatient care need follow-up monitoring and continuity of care to ensure their safety. Kaiser Permanente Southern California (KPSC) is leading the way in broadening the definition of patient safety with the creation of Kaiser Permanente SureNet. This centralized effort systematically identifies and addresses groups of patients with outpatient safety risks. Kaiser Permanente's SureNet leverages Kaiser Permanente's integrated delivery system and KP HealthConnect[®] to drive a new model for outpatient health care and safety.

The overall goal of the Kaiser Permanente SureNet is to centrally support front-line care by proactively identifying outpatient safety risks in order to avoid/reduce adverse outcomes for the Kaiser Permanente patient populations, including many who never present to the hospital.

This is done by:

- Leveraging Kaiser Permanente's integrated delivery system and comprehensive electronic medical record to proactively identify outpatients with certain abnormal results, medication profiles, or gaps in follow-up care and provide necessary intervention.
- Rapidly launching new SureNet initiatives, leveraging a standard launch process, electronic tools, and protocol-driven workflows, to address outpatient safety risks quickly and efficiently with system wide solutions.

- Ensuring consistent outcomes that are not contingent on local variation, priorities, budget constraints or resource restrictions.
- Facilitating the transfer of this practice nationally across Kaiser Permanente regions and to outside organizations (including community clinics) to ultimately drive a new model for outpatient health care delivery across the country.

Implementation Overview

Since inception in 2009, thirty (30) SureNet initiatives have been launched in these areas of safety risk:

- Diagnosis detection and care follow-up
- Medication monitoring including potentially harmful interactions

PROJECT HISTORY:

October 2009 – First manual Kaiser Permanente SureNet launched for patients on Digoxin. Abnormal results detected in 34 patients otherwise not detected.

Project repeated in 2010 and 2011. After its success, many new ideas surfaced that resulted in additional SureNet projects.

February 2010 – Second manual initiative launched to follow up on unrepeated abnormal creatinine lab results. As a result, 214 new cases of chronic kidney disease were identified that otherwise would have been missed.

August 2010 – Acetaminophen (APAP) Overuse Safety Net launched in response to FDA warnings about APAP overuse hazards. Interventions on 210 patients in the first 30 days reduced the risk of potentially harmful interactions by 22.2 percent.

Based on the success of these initiatives and three previously launched electronic safety nets, the KPSC Kaiser Permanente SureNet became official in 2010, with an identified infrastructure and process to support the various ongoing and new initiatives of outpatient safety risk: diagnosis detection and care follow-up, medication management including potentially harmful interactions.

The list of ideas for new projects is continually fueled by HEDIS or other publicly reported metrics, requests from physicians, frontline staff, medico-legal case learnings, risk management, medical literature, regional and service area leadership, and presentations at national conferences.

APPROACH

Kaiser Permanente SureNet is staffed by a small cross functional team consisting of pharmacists, RN and LVN's project coordinators, and data analysts. SureNet leverages KP HealthConnect[®], the organization's electronic medical record, and other automated tools.

The development and spread of successful practices is standardized into the following approach:

- Each KPSC Kaiser Permanente SureNet project is overseen by a multidisciplinary Subject Matter Expert and Stakeholder (SMES) Panel, specific to the target population. Additional participants from diverse disciplines are involved, particularly when unique perspectives are needed for project success (e.g., coding, clinical specialties, health plan benefits, information systems, etc.).
- Through a rigorous development process, each idea is expanded into a detailed proposal. Upon final SMES Panel approval, an announcement is sent to all providers potentially impacted by the initiative.

- For each initiative, a list of patients and data needed are pulled from various centralized databases and electronic tools.
- Working in collaboration with providers, Kaiser Permanente SureNet team members intervene with outpatients on the provider's behalf and obtain information necessary for the provider to make clinical decisions.
- Patients are then asked to act upon provider-approved interventions, which may include completing lab work, scheduling a visit, changing medication, completing immunizations, etc.
- Each patient is tracked until either the proper follow up occurs, or is closed via documentation of patient refusal, non-compliance or contraindication in the electronic medical record.
- The majority of interaction between the team and providers occurs in the electronic medical record. Kaiser Permanente's centralized outreach infrastructure enables communications with patients that is customized by project and deployed through a variety of outreach methods such as letters, live calls, automated calls, and email.
- Using this standardized implementation process, new safety net ideas can be deployed within a few months.

Resulting Value / ROI

SOUTHERN CALIFORNIA REGION RESULTS:

ABDOMINAL AORTIC ANEURYSM (AAA) TRACKING

2011-2014

- Population 3.86 million
- Subsequent to implementation of a Best Practice Alert; 2062 new AAAs were diagnosed, with 87 identified as requiring surgical intervention
- Percentage of unscreened patients was reduced from 51.74% to 20.26% system-wide

REPEAT SERUM CREATININE

Over 5 years, 12,396 patients were identified with an elevated creatinine that wasn't repeated. 6,981 (56.3%) of patients completed a lab order. Among the 6,981 individuals who repeated the creatinine measurement, CKD was established in 3,668 (52.5%).

STATIN DRUG INTERACTION CONVERSION

Kaiser Permanente SureNet drove an 87% reduction in potentially harmful interactions which resulted in a significant reduction of annual rhabdomyolysis cases.

HEPATITIS C

- In 2014, 1,055 patients were identified as having had a reactive Hepatitis C antibody test (prior to confirmatory testing).
 - 663 (62%) completed lab orders

- 264 (25%) tested positive for Hepatitis C.

ELDERLY HIGH DOSE DIGOXIN CONVERSION

Since May 2013, over 1,400 patients have been switched to low dose digoxin.

TRANSFER ACROSS THE ENTERPRISE

Kaiser Permanente SureNet was created and deployed in Southern California and then transferred across Kaiser Permanente regions nationwide. Kaiser Permanente regions are distinctly positioned to explore outpatient safety using information in our integrated electronic medical record and Kaiser Permanente's strategically aligned provider infrastructure. Regions can leverage existing quality and population care management processes and structure to create a centrally coordinated, standardized approach for addressing outpatient safety risks and generating new safety net initiatives, potentially improving care and safety for millions of patients.

Lessons Learned

- Ambulatory safety is a new frontier in health care delivery that offers a unique opportunity for care improvement.
- A centralized process has allowed for improvement in decreasing variation.
- A standardized design and process coupled with the integration and electronic tools allows for rapid expansion across regions and rapid deployment of new initiatives

"Kaiser Permanente SureNet is great because any physician, any specialty can come up with an idea and can present it and can get it done..."

Mark Rutkowski, M.D.

Southern California Regional Chronic Kidney Disease Leader

This program really speaks to Kaiser Permanente's commitment to provide the safest, most reliable care that's possible.

Michael Kanter, M.D.

Director Quality and Clinical Analysis