

## Selected findings

In 2014, Kaiser Permanente Southern California scientists and clinician researchers made important findings in a variety of research areas. The following is a small sample of some of these discoveries.



### Allergy and Asthma

Asthma exacerbation rates remained relatively constant over time, and continuous high treatment intensity was not associated with a substantially lower risk of exacerbations.

Schatz M et al. *J Allergy Clin Immunol Pract.* 2014;2(5):570-574.e1.



### Bone Health and Orthopedics

Patients who have bariatric surgery before total joint arthroplasty may not receive dramatic improvements in post-operative arthroplasty surgical outcomes.

Inacio MC et al. *J Arthroplasty.* 2014;29(7):1359-1364.

When compared to younger patients, people ages 90 years and older who undergo total knee arthroplasty do not have an increased risk of complications, and their postoperative mortality rate is within the expected range for their age.

Miric A et al. *J Arthroplasty.* 2014;29(8):1635-1638.

Younger, male patients are at greater risk for deep infection after primary shoulder arthroplasty. Reverse total shoulder arthroplasty and traumatic shoulder arthroplasties also carry a greater risk for infection.

Richards J et al. *Clin Orthop Relat Res.* 2014;472(9):2809-2815.

Complex shoulder procedures (shoulder arthroplasty) are, on average, performed more efficiently by higher volume surgeons in higher volume centers.

Singh A et al. *J Shoulder Elbow Surg.* 2014;23(8):1187-1194.



### Cancer

The adenoma detection rate with colonoscopy exam was inversely associated with the risks of interval colorectal cancer diagnosis, advanced-stage interval cancer, and fatal interval cancer.

Corley DA et al. *N Engl J Med.* 2014;370(14):1298-1306.

Men who are overweight or obese when diagnosed with prostate cancer are more likely to die from the condition than men of normal weight.

Haque R et al. *Obes Res Clin Pract.* 2014;8(4):e374-381.

Colonoscopies with negative findings were associated with decreased incidence of subsequent colorectal cancer, and a decrease in racial/ethnic disparities in risk of colorectal cancer after screening, compared with sigmoidoscopies with negative findings.

Wu BU et al. *Gastrointest Endosc.* 2014;80(5):852-861.



### Cardiovascular Disease

A screening program for abdominal aortic aneurysms, implemented through an electronic health record, reduced the number of unscreened at-risk men by more than 50% within 15 months.

Hye RJ et al. *J Vasc Surg.* 2014;59(6):1535-1542.

Self-reported moderate-to-vigorous exercise was associated with lower blood pressure and blood glucose levels in both men and women.

Young DR et al. *Prev Chronic Dis.* 2014;11:E219.



### Diabetes

The incidence of type 1 diabetes increased significantly from 2002 to 2009 among non-Hispanic white youth in all but the youngest age group of children (ages 0 through 4 years). Increases were most pronounced among children ages 5 through 9 years.

Lawrence JM et al. *Diabetes.* 2014;63(11):3938-3945.



## Health Economics

Twenty-six percent of adults diagnosed with attention deficit hyperactivity disorder (ADHD) are subsequently diagnosed with at least 1 other mental health condition. Among those ADHD patients diagnosed subsequently with 2 or more mental health conditions, medical costs nearly doubled and the use of medical resources also significantly increased.

Kawatkar AA et al. *Value Health*. 2014;17(6):661-668.



## Infectious Disease

More than 80% of hospitalized patients infected with *Clostridium difficile* were detected as outpatients or within the first 72 hours of hospitalization, suggesting that settings outside of the hospital may play key roles in the identification, onset, and possible transmission of the disease.

Tartof SY et al. *Mayo Clin Proc*. 2014;89(9):1229-1238.

After implementation of an antimicrobial stewardship program—including a dedicated pharmacist—at 2 pilot medical center sites, the utilization of specialized and broad-spectrum antibiotics decreased, resulting in decreases in drug costs and decreases in infection-related mortality of inpatients.

Yu K et al. *Am J Health Syst Pharm*. 2014;71(12):1019-1028.



## Maternal and Infant/Neonatal Health

From 1995 to 2006 there was an increase in preterm-birth rates, a decrease in labor inductions, and a sharp decline in stillbirth, neonatal, and infant mortality rates in the U.S.

Getahun D et al. *J Perinatol*. 2014;34(11):823-829.

Pregnant women who suffer from inflammatory bowel disease were at higher risk of premature labor and other pregnancy complications. The severity of that risk, though, can depend on the subtype of the disease.

Getahun D et al. *J Perinatol*. 2014;34(6):435-440.



## Neurological Disorders

Starting treatment with interferon beta or glatiramer acetate within 2 weeks of giving birth does not reduce the risk of postpartum relapse of multiple sclerosis for women who did not breastfeed, or breastfed very little. The treatment may, though, reduce the risk of subsequent relapses in the postpartum year.

Beaber et al. *Perm J*. 2014;18(1):9-13.

The incidence of clinically isolated syndrome varies by race/ethnicity and sex in a similar pattern to multiple sclerosis, strengthening the probability that the old belief that black people have a lower risk of MS is no longer true.

Langer-Gould A et al. *J Neurol*. 2014;261(7):1349-1355.



## Prevention and Behavior Change

Substantial amounts of unhealthy foods and beverages were brought onto school campuses for classroom rewards, celebrations, and fundraising.

Caparosa SL et al. *Public Health Nutr*. 2014;17(6):1205-1213.



## Quality Improvement

Emergency department crowding was not associated with increased mortality, but was associated with length of stay after being admitted to the hospital. The study provides justification for low boarding times—how long a patient who is being admitted to the hospital is held in the emergency room before transfer to an inpatient bed—as a meaningful measure of emergency department quality.

Derose SF et al. *Med Care*. 2014;52(7):602-611.

Some patients develop hospital-acquired pressure ulcers regardless of their nursing care.

Omery A et al. *Nurs Manage*. 2014;45(4):36-43.



## Vaccine Safety and Effectiveness

There may be immunogenetic differences underlying vaccine-associated febrile seizures compared with other febrile seizures.

Tartof SY et al. *Vaccine*. 2014;32(22):2574-2581.

The herpes zoster vaccine continues to be effective in protecting older adults against shingles, even after they undergo chemotherapy.

Tseng HF et al. *Clin Infect Dis*. 2014;59(7):913-919.