Selected findings

2013 publications

Total publications: 371
First author: 215
Senior author: 169

In 2013, 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**

The risk of severe asthma attacks for overweight and obese adults is greater during the fall and winter months.¹

Five questions about medication adherence and asthma control can aid clinicians in identifying patients at risk of not taking their prescribed medications and the specific barriers involved.²

**Bone Health and Orthopedics**

Patients with diabetes who undergo total knee replacement surgery do not have increased risk of surgical complications compared to those patients without diabetes.³

Use of a comprehensive infection surveillance system, combined with a total joint replacement registry, identified patient and surgical factors associated with infection following knee replacement surgery.⁴

Risks and benefits of using routine medications to prevent blood clots should be considered in surgeries in which the risk of blood clots may be higher. These include reverse shoulder arthroplasties and traumatic hemiarthroplasties.⁵

**Cancer**

The presence of microscopic hematuria—blood found in urine that can’t be seen by the naked eye—does not necessarily indicate the presence of cancer. This study suggests that tests routinely done on patients with microscopic hematuria could be avoided and has led to the creation of a screening tool to better identify certain types of cancers.⁶

Measurements of serum prostate-specific antigen (PSA) taken over time, the most commonly used screening test for prostate cancer in men, improve the accuracy of aggressive prostate cancer detection when compared to a single measurement of PSA.⁷

**Cardiovascular Disease**

Nearly 13% of people with high blood pressure have resistant hypertension, meaning their hypertension cannot be controlled with 3 or more medications or they require 4 or more medications to treat their hypertension.⁸

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Child and Adolescent Health
Boys are more likely to receive the quadrivalent human papillomavirus vaccine if their mothers receive flu shots or Pap screenings.  

Clinical Guidelines
A multi-disciplinary panel developed new recommendations for evaluating patients with potentially cancerous pulmonary nodules. The new guidelines stress the value of assessing the probability of cancer, the accuracy and utility of imaging tests, the need to weigh the benefits and harms of different management strategies (nonsurgical biopsy, surgical resection, and surveillance with chest CT imaging), and the importance of eliciting patient preferences.

Diabetes
The distribution of DRB1-DQB1 haplotypes and their association with onset-related characteristics of autoimmune diabetes varies across major racial/ethnic groups in the U.S. This may contribute to variation in clinical presentation of autoimmune diabetes by race/ethnicity. High-fat diets may contribute to increased obesity, insulin resistance, and associated beta-cell dysfunction in Mexican-Americans.

Gestational Diabetes
Women who are overweight or obese are more likely to deliver infants who are large for their gestational age at delivery, regardless of whether they develop gestational diabetes during their pregnancy.

Health Equity
Among California Medicaid rheumatoid arthritis patients, African-Americans had 53% lower odds of receiving biologic disease-modifying anti-rheumatic drugs as compared to Caucasians.

Injury
Greater body mass index in children is associated with increased odds of lower extremity injuries and pain issues. Because the benefits of physical activity may still outweigh the risk of injury, attention should be paid to injury prevention strategies for children at greater risk for lower extremity injuries.

Innovation and Process Transformation
Patients who received automated telephone calls inviting them to get their blood pressure checked at a walk-in clinic were more likely to have controlled hypertension than patients who did not receive calls.

Kidney Disease
Black, Hispanic, and Asian patients have higher rates of end-stage renal disease than white patients, due in part to faster kidney function decline and in part to increased survival.
Maternal and Infant/Neonatal Health
The incidence of chorioamnionitis—an infection of the amniotic fluid, fetal membranes, and placental tissues, and one of the most frequent causes of preterm birth and infant illness—more than doubled between 1995 and 2010.18

The rate of children diagnosed with Attention Deficit Hyperactivity Disorder rose dramatically between 2001 and 2010, with non-Hispanic white children having the highest diagnosis rates. There also was a 90% increase in the diagnosis of ADHD among non-Hispanic black girls during the same 9-year period.19

Medication Adherence
Automated phone and letter intervention was effective in reducing the number of patients who didn’t fill their first-time statin prescriptions. Because of the low cost of this outreach, this strategy appears feasible for reducing primary nonadherence and may generalize well to other medications and chronic conditions.20

Patients who do not fill their first prescription for cholesterol-lowering statins give a wide range of reasons for not doing so, including perceived concerns about the medication, a fear of side-effects and a decision to try lifestyle modifications instead of prescription.21

Nearly 30% of women failed to pick up their bisphosphonate prescriptions, a medication that is most commonly used to treat osteoporosis and similar bone diseases. The failure to pick up these newly prescribed medications can lead to an increased risk of fractures for these patients.22

Neurological Disorders
Multiple sclerosis is more common in black women than in white women. The finding runs contrary to the widely accepted belief that blacks are less susceptible to MS.23

Prevention and Behavior Change
High body weight in children and adolescents is strongly associated with the likelihood of hypertension.24

Sports Medicine
Although the overall infection rate after anterior cruciate ligament reconstruction (ACLR) is 0.48%, there is an increased risk of deep infections with hamstring tendon autografts.25

Vaccine Safety and Effectiveness
Older adults who were immunized with the tetanus-diphtheria-acellular pertussis vaccine (Tdap) to help prevent pertussis were at no greater risk of side effects than older adults immunized with tetanus and diphtheria vaccine (Td).26

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