

# Abstracts of Articles Authored or Coauthored by Permanente Physicians

Selected by Daphne Plaut, MLS, Librarian, Center for Health Research

## *From Southern California:* **Hormone use and cognitive performance in women of advanced age.**

*Buckwalter JG, Crooks VC, Robins SB, Petitti DB. J Am Geriatr Soc 2004 Feb;52(2):182-6.*

**OBJECTIVES:** To explore the association between hormone replacement therapy (HRT) and cognitive performance in a group of elderly women ( $\geq 75$ ) using a battery of well-standardized neuropsychological instruments.

**DESIGN:** Equivalent samples from existing cohort.

**SETTING:** Health care provider organization.

**PARTICIPANTS:** All women enrolled were participants in an ongoing study of the association between HRT and the prevalence and incidence of dementia. Prescription records were used to establish HRT status. Fifty-eight users and 47 nonusers of HRT participated in this substudy.

**MEASUREMENTS:** Given previous reports that HRT has a positive effect on verbal memory, the California Verbal Learning Test and the Logical Memory Test were used as primary outcomes. A range of validated tests that assess other cognitive domains was also included.

**RESULTS:** There were no significant differences between users and nonusers of HRT on any cognitive measures.

**CONCLUSION:** Given equivalent groups of users and nonusers of HRT no support was found for the hypothesis that use of HRT improves cognitive performance in older women.

## *From Southern California:* **Diabetes mellitus and cognitive performance in older women.**

*Crooks VC, Buckwalter JG, Petitti DB. Ann Epidemiol 2003 Oct;13(9):613-9.*

**PURPOSE:** This cross-sectional study sought to identify diabetes accurately in a study population of 3681 women age 75 and older and

to determine the association of diabetes with cognitive performance.

**METHODS:** A previously validated test, the Telephone Interview of Cognitive Screening-Modified (TICS<sub>m</sub>) was given to assess cognitive status. A diabetes case identification database, medical record review and self-report were used to determine diabetes cases. Four hundred eighty-nine (13.3%) of the women in the study were classified with diabetes and 3192 without diabetes.

**RESULTS:** T-tests and linear regression analyses determined that diabetic women had a mean TICS<sub>m</sub> score 1.4 points lower (ie more impaired) than nondiabetic women. Using linear regression to adjust for age, education, and vascular disease, diabetic women showed a 1.1 lower score on the TICS<sub>m</sub>. Similar adjustments were made for potential confounding variables such as depression, hormone replacement therapy (HRT), high body weight, smoking, alcohol use and exercise, and diabetics again showed a 1.0 lower score.

**CONCLUSION:** This study, which utilizes highly rigorous case identification methodology, provides further evidence that diabetes is associated with significantly worse cognitive performance in the elderly.

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**CLINICAL IMPLICATION:** In this large cross-sectional study, we have confirmed the association of diminished cognitive performance with diabetes in elderly females. It is important for clinicians to be aware that, in addition to its more well-known complications, diabetes mellitus may increase the risk of cognitive decline. This condition can greatly hamper the ability of patients to follow their treatment regimen and can further inhibit their normal daily function. —VC

## *From Northern California:* **Cohort study of exposure to environmental tobacco smoke and risk of first ischemic stroke and transient ischemic attack.**

*Iribarren C, Darbinian J, Klatsky AL, Friedman GD. Neuroepidemiology 2004 Jan-Apr;23(1-2):38-44.*

The independent effect of exposure to environmental tobacco smoke (ETS; passive smoking) on the risk of stroke is not well established. We performed a cohort study among 27,698 lifelong nonsmokers with no prior history of stroke, 62% women, aged 30-85 years at enrollment (1979-1985). Self-reported ETS exposure at home and outside home (in hours/week) and stroke risk factors were collected at a health plan in San Francisco and Oakland. Follow-up for hospitalization and death was available through the end of 2000 (median = 16 years). In multivariate analysis adjusting for age, race/ethnicity, educational attainment, marital status, hypertension, diabetes and serum total cholesterol, ETS exposure at home of 20 hours or more/week (in relation to <1 hours/week) was associated with a 1.29-fold (95% CI 0.75-2.20) and a 1.50-fold (95% CI 1.07-2.09) increased risk of first ischemic stroke among men and women, respectively. No significant associations were found between ETS exposure outside home and ischemic stroke or between exposure to ETS at home or out of home and the risk of transient ischemic attack. Although potentially important confounders (such as dietary habits) were not included in the analysis, high-level ETS exposure at home was independently associated with increased risk of first ischemic stroke among never-smoking women.

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**CLINICAL IMPLICATION:** The independent effect of passive smoking on the risk of stroke is not well established. Although potentially

important confounders (such as dietary habits) were not included in the analysis, a high self-reported level of passive smoking at home (20 hours per week or more) was independently and significantly associated with a 1.5-fold increased risk of first ischemic stroke among never-smoking women. A consistent but weaker association was seen in men. —CI

*From Northern California:*

### **A post-licensure evaluation of the safety of inactivated hepatitis A vaccine (VAQTA, Merck) in children and adults.**

*Black S, Shinefield H, Hansen J, Lewis E, Su L, Coplan P. Vaccine 2004 Jan 26;22(5-6):766-72.*

**BACKGROUND:** Hepatitis A is a major cause of epidemic hepatitis in the US. In pre-licensure trials, inactivated hepatitis A vaccine (HAV, VAQTA, Merck) was shown to be generally well tolerated and effective in inducing immunity to hepatitis A infection in adults and children over two years of age. Following the licensure of this vaccine, we began a Phase IV safety evaluation in adults and in children over two years of age.

**METHODS:** Safety was assessed by comparing the rates of diagnoses in clinic, emergency and hospital utilization. From April 1997 to December 1998, rates of diagnoses within 30 days for the clinic and emergency setting and 60 days for hospitalization were compared with unexposed follow-up time in the same individuals both before receipt of vaccine and after the 60 days interval post-vaccination.

**RESULTS:** There were a total of approximately 2000 comparisons between the risk and “before” or “after” period. Among them, 106 were found to have statistically significant differences in rates (30 elevated, 76 lowered). Among children/adolescents (2-17 years old), in the hospitalization category, the only statistically significant elevated risk found was “elective procedures,” as compared with both “before” and “after” periods. In the outpatient visit category for children and adolescents, elevated risks were found for consultation/general medicine/exam when compared with both “before” and “after” periods, and ganglion and viral warts when

compared with either “before” or “after” period. Among adults ( $\geq 18$  year-old), in the outpatient visit category, a statistically significant elevated relative risk was seen for diarrhea/gastroenteritis for both “before” and “after” periods. There were additionally 17 diagnostic categories that showed a statistically significantly elevated relative risk compared with either “before” or “after” period. Except for diarrhea/gastroenteritis, the other eight events were elevated only in one comparison (either “before” or “after”). These eight elevated relative risks might be explained by chance resulting from multiple comparison or seasonal variations. There were no serious adverse events judged by the investigator to be associated with HAV.

**CONCLUSION:** In this large Phase IV evaluation of the safety of HAV, the vaccine appeared to be generally well tolerated. These data support the continued routine use of HAV for vaccination in children and adults.

*Reprinted from Vaccine, 22(5-6), Black S, Shinefield H, Hansen J, Lewis E, Su L, Coplan P, A post-licensure evaluation of the safety of inactivated hepatitis A vaccine (VAQTA, Merck) in children and adults, 766-72, Copyright 2004, with permission from Elsevier.*

**CLINICAL IMPLICATION:** The hepatitis A vaccine was evaluated for safety in children and adults by Northern California Kaiser Permanente. In this large postmarketing evaluation of the vaccine, no safety concerns were identified. Hepatitis A vaccine is currently recommended for routine use in states, such as California, with high endemicity. —SB

*From Northern California:*

### **High rates of co-occurrence of hypertension, elevated low-density lipoprotein cholesterol, and diabetes mellitus in a large managed care population.**

*Selby JV, Peng T, Karter AJ, et al. Am J Manag Care 2004 Feb;10(2 Pt 2):163-70.*

**OBJECTIVE:** To examine prevalence and co-occurrence of diabetes mellitus (DM), hypertension (HT), and elevated low-density lipoprotein cholesterol (dyslipidemia, or DL) in a managed care population.

**STUDY DESIGN:** Period prevalence study.

**PATIENTS AND METHODS:** The study population included all adults (age > 20 years) who had been members of Kaiser Permanente, Northern California, for at least four months on December 31, 2001 (n = 2.1 million). Criteria from the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of Hypertension, the Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults, and the Northern California Kaiser Permanente Diabetes Registry were applied to computerized databases for an 18-month period to identify HT, DL, and DM, respectively. Because screening for these conditions is incomplete, we applied age- and sex-specific prevalence estimates from the Third National Health and Nutrition Examination Survey to simulate full ascertainment.

**RESULTS:** Unadjusted prevalence rates of HT, DL, and DM were 23.8%, 17.6%, and 6.6%, respectively. More than 50% of persons with either HT or DL also had at least one other condition. Of all persons with DM, 74% had HT, 73% had DL, and 56% had both. Under full ascertainment, prevalence increased to 27.6%, 35.6%, and 8.7% for HT, DL, and DM, respectively, and co-occurrence increased further.

**CONCLUSION:** HT, DL, and DM co-occur in most affected individuals. To avoid fragmentation of care, disease management strategies should aim to manage these conditions within the same programs.

**CLINICAL IMPLICATIONS:** This paper presents the extraordinary rates at which hypertension, elevated LDL cholesterol level, and diabetes mellitus co-occur in general populations. Of all patients with dyslipidemia 47% also have hypertension, whereas 56% of those with hypertension also have dyslipidemia. Of persons with diabetes, more than 90% have either hypertension or dyslipidemia, and more than 60% have both conditions. In light of this overlap and the high risk for cardiovascular disease when two or more conditions are present, population programs addressing any of these conditions should be planned and implemented to address all three. —JS

*From Southern California:*  
**Use of inhaled steroids by pregnant asthmatic women does not reduce intrauterine growth.**

Namazy J, Schatz M, Long L, et al. *J Allergy Clin Immunol* 2004 Mar;113(3):427-32.

**BACKGROUND:** Inhaled steroids are recommended for the treatment of persistent asthma during pregnancy, but their potential effects on intrauterine growth have been inadequately evaluated.

**OBJECTIVE:** The purpose of this study was to evaluate the association between maternal use of specific inhaled steroids and inhaled steroid dose during pregnancy and the incidence of infants who are small for gestational age (SGA) and mean birth weight.

**METHODS:** Pregnant asthmatic women being treated with inhaled steroids were enrolled in the study before delivery by their managing allergists. Information regarding the specific inhaled steroid and daily dose used, requirement for oral steroids, occurrence of acute asthmatic episodes, maternal race, birth weight, gestational age, and congenital malformations was obtained for each patient. SGA was defined through use of a published normative sample of American births.

**RESULTS:** A total of 474 women were enrolled in the study; of the 451 enrolled participants whose pregnancy ended in a singleton live birth, 396 (88%) completed the study. The incidence of infants with low birth weight, preterm births, and congenital malformations in this cohort was not greater than expected in the general population. The incidence of SGA was 7.1% (95% CI, 5.0% to 10.1%). No significant relationships between specific inhaled steroid or dose of inhaled steroid used and either SGA or mean birth weight were observed.

**CONCLUSION:** These data suggest that the use of inhaled steroids by pregnant asthmatic women does not reduce intrauterine growth and supports the recommendation that inhaled steroids should be used in the management of persistent asthma during pregnancy.

*Reprinted from Journal of Allergy and Clinical Immunology, 113(3), Namazy J, Schatz M, Long L, et al, Use of inhaled steroids by pregnant asthmatic women does not reduce intrauterine growth, 427-32,*

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**CLINICAL IMPLICATION:** Prior studies suggest that uncontrolled asthma during pregnancy may be associated with adverse maternal and infant outcomes. However, previously described adverse effects of oral corticosteroids on intrauterine growth and of some inhaled steroids on growth in children raised the possibility of an adverse effect of inhaled corticosteroids on fetal growth. These data suggest that currently used inhaled corticosteroids do not reduce intrauterine growth. This study thus supports current recommendations that inhaled corticosteroids should be considered preferred controller therapy for pregnant patients with persistent asthma. —MS

*From Northern California:*  
**Incidence and prevalence of uveitis in Northern California; the Northern California Epidemiology of Uveitis Study.**

Gritz DC, Wong IG. *Ophthalmology* 2004 Mar;111(3):491-500; discussion 500.

**PURPOSE:** To determine the incidence and prevalence of uveitis in a large, well-defined population in Northern California.

**DESIGN:** Cross-sectional study using retrospective database and medical record review.

**PARTICIPANTS:** A group of 2070 people within six Northern California medical center communities (n = 731,898) who had a potential diagnosis of uveitis.

**METHODS:** The patient database of a large health maintenance organization (2,805,443 members at time of the study) was searched for all patients who, during a 12-month period, had the potential diagnosis of uveitis. Detailed quarterly gender- and age-stratified population data were available. Medical records of patients who potentially had uveitis and who were members of the six target communities were reviewed by two uveitis subspecialists to confirm the diagnosis of uveitis and to establish time of onset. Demographic and clinical data were gathered for patients meeting the clinical definition of uveitis. Incidence rates were calculated by using a dy-

namic population model. Prevalence rates were based on the mid-study period population.

**MAIN OUTCOME MEASURES:** Presence and date of onset of uveitis.

**RESULTS:** At midstudy, the population for the six communities was 731,898. During the target period, 382 new cases of uveitis were diagnosed; 462 cases of uveitis were diagnosed before the target period. These data yielded an incidence of 52.4/100,000 person-years and a period prevalence of 115.3/100,000 persons. The incidence and prevalence of disease were lowest in pediatric age groups and were highest in patients 65 years or older (p < 0.0001). The prevalence of uveitis was higher in women than in men (p < 0.001), but the difference in incidence between men and women was not statistically significant. Comparison between the group of patients who had onset of uveitis before the target period (ongoing uveitis) and the entire cohort of uveitis patients showed that women had a higher prevalence of ongoing uveitis than men and that this difference was largest in the older age groups (p < 0.001).

**CONCLUSION:** In this largest population-based uveitis study in the United States to date, the incidence of uveitis was approximately three times that of previous US estimates and increased with the increasing age of patients. Women had a higher prevalence of uveitis than men, and the largest differences were in older age groups.

*Reprinted from Ophthalmology, 111(3), Gritz DC, Wong IG, Incidence and prevalence of uveitis in Northern California; the Northern California Epidemiology of Uveitis Study, Copyright 2004, with permission from American Academy of Ophthalmology.*

**CLINICAL IMPLICATIONS:** This study is an important reassessment of the present epidemiology of uveitis in the diverse population served by Kaiser Permanente Northern California. The much higher rates of disease, especially in people over 65 and in women over 65, are of concern. Uveitis patients are at significant risk of ocular complications and visual loss. Because of the severity of their disease, uveitis patients utilize more health care resources, and that could also impact the health care system, especially with the aging of our population. —DG ❖

# Practice Innovations with Results

*Abstracts from the March 2004 KP San Diego Primary Care Access Conference*

*This special section includes abstracts taken from the KP Primary Care Access Conference to highlight innovations in practice so that clinicians can see what is new, and to create a broadened sense of organizational change, a vision of the future, and potential resolutions to current dilemmas. We hope to encourage others to create trials of their own, guided and encouraged by those who presented.*

*From Hawaii:*

## **Patient Care Messaging as an Alternative to the Traditional Visit Paradigm**

*William E Clevenger, MD*

**WHY:** Traditional office visits and the increasing workload related to the assessment of and action on electronic data overloading front-line doctors.

**WHAT:** At the Kaiser Permanente Mililani Clinic, we created a new workflow and role for our PCPs: One physician daily is relieved of his/her traditional role and functions as the Patient Care Messaging physician. This “designated hitter” deals with electronic information, makes phone contact with patients and deals with overload and walk-in patients in the clinic.

**RESULTS:** Our experience shows that we create increased opportunities for patient contact while decreasing the perceived workload and burnout of our staff. We are averaging five more daily “patient contact opportunities” than a conventional schedule.

**VOICES:** “Our patients seem positive about the program. When all family members are working, they appreciate not having to take time off from work to get medical advice.”

“Doing something ‘different’ seems to break up the work week a little. I like it.”

*Presented by William E Clevenger, MD; e-mail: bill.clevenger@kp.org.*

*From Ohio and Group Health Cooperative:*

## **Predicting Appointment Demand**

*Nicholas Dreber, MD, Ohio; Mark Spadin, Ohio; Belinda Potts, Ohio; June BlueSpruce, GHC; Tony Posch, MD, GHC*

**WHY:** While the historical adjusted demand approach is valuable for planning annual staffing, the true demand approach offers potential for determining historically unmet demand. An accurate demand forecast model impacts access planning.

**WHAT:** There are two demand models: The “historical adjusted demand” approach uses historical utilization, based on gender/age distribution, as a starting point, and adjusts for other factors, such as membership changes, disease burden, and unmet demand. The “true demand” approach looks at appointments requested, not appointments made.

**RESULTS:** Although these models have limitations, they still predict better than “no prediction” at all. The demand model alone won’t improve access—using forecast information to help with access planning will make a difference.

*Contact Julie Liao; e-mail: julie.liao@kp.org.*

*From Southern California:*

## **SCPMG Web Based Patient Panel System**

*Andrew Golden, MD; Waldemar Strubinski*

**WHY:** A desktop-based Patient Panel System was limited by single-user only access and the need for individual, custom installation.

**WHAT:** The Southern California Region developed a Web-based Patient Panel System for all 12 of its Medical Center Areas. The database provides updated panel and demand data, and allows for local entry of supply-side information, including distribution of the nonpanel provider supply among the panel providers. The application integrates the

regionally projected demand data with the locally entered supply information, resulting in panel reports that are downloadable as needed.

**RESULTS:** The new Web-based system allows any user to view or update data created within his department, facility, Medical Area, or across the entire SCAL Region, depending on his/her security access level. A KP-IT programmer controls the system resources. Anyone with Web access can use the system, eliminating individual installation.

The user base has more than doubled, and user satisfaction has increased.

*Presented by Andrew Golden, MD; e-mail: andrew.m.golden@kp.org and Waldemar Strubinski; e-mail: waldemar.w.strubinski@kp.org.*

*From Northern California:*

## **Santa Teresa Access Management**

*Priya Smith; William Yee; Maritess Salaysay*

**WHY:** The success of an access management process lies in both prospective and real time management of appointment availability.

**WHAT:** The components in this process include:

- Meetings: the access “team” meets on a regular basis and involves various individuals from the department;
- Data analysis: an analyst assigned to Medicine provides prospective and real time access data to the team;
- Decision making: the team provides a forum to make adjustments to appointment supply as needed to help meet access goals;
- Strategic planning: initiatives to help meet specific access targets such as 75% of appointments booked at first call by the Appointment & Advice Call Center;
- Performance evaluation and trending: examine retrospective data to assess access performance and show improvements and areas for improvement.

**RESULTS:** The Member Patient Satisfaction

scores reflect significant patient satisfaction with the ability to get an appointment.

*Presented by Priya Smith; e-mail: priya.s.smith@kp.org.*

*From Hawaii:*  
**Proactive Linking (Improvements to the Hawaii Region’s Exit Linking Program)**

*Chris Lutz*

**WHY:** A core principle in the Hawaii Region is: “The Key Relationship for the Member is with His or Her Own Physician.”

**WHAT:** As a result of the Focus Groups, the Hawaii Region will be piloting a “proactive linking” program in 2004-2005 that will include a packet of information for new members with a welcome letter describing the importance of having a personal doctor; a brochure from the member’s “home clinic” with basic information including how to choose a primary care physician (PCP); “bio cards” of available PCPs that include basic information and four to five specific comments from the patient satisfaction surveys for this physician, as well as a statement about the physician’s “philosophy of medicine”; (see figure 1) and a reply card for the member to indicate a PCP preference.

Subsequently, the member will receive a welcome and a *Healthwise Handbook* from his/her new PCP.

**RESULTS:** The pilot will be conducted at one Oahu Clinic from July 2004 until June 2005. If



Figure 1. New bio card.

the results are positive, the program will be implemented regionwide in the second half of 2005.

*Presented by Chris Lutz; e-mail: chris.lutz@kp.org.*

*From Hawaii, the Northwest, and Southern California:*  
**Yardsticks for Measuring Access**

*Chris Lutz; Bill Pfeiffer, MD; Waldo Luciano, MD; Kristina Spabr*

**WHY:** The entire program has a great deal of access measures; we wanted to advance the knowledge of the program by sharing effective practices from around the region.

**WHAT:** All Regions create primary care access reports that fall into seven broad categories. Standardization and consistency in these reporting systems would allow more effective utilization.

**RESULTS:** Operational measures have improved across the board simply with delivering measures to frontline staff and improving systems to allow for patient-centered systems.

**VOICES:** “It’s good to see where each operation is scoring so that we get positive reinforcement about what works and so that we know where to focus on what doesn’t. It’s great to see the staff respond to their measures and take ownership for improvement.”

For more information and for examples of all of the measures, please see the CEC Intranet site: [http://kpnet.kp.org/permfed/Education/pcaccess\\_conference.htm](http://kpnet.kp.org/permfed/Education/pcaccess_conference.htm). ♦

*Presented by Chris Lutz; e-mail: chris.lutz@kp.org.*

**Forward**

If you cry “forward” you must without fail make plain in what direction to go.

— Anton Chekhov, 1860-1904, Russian writer and physician