

# The Cancer Research Network Connection

## News from Ed, Larry, and Mark

*Update from the CRN Executive Committee*

We are all looking forward to the March 15 meeting between Dr. Francis Collins, Director of the NIH, and researchers and leaders from the HMORN to discuss the potential of the HMORN to become an NIH-funded “Collaboratory” (see <http://commonfund.nih.gov/hmocolaboratory/>). The agenda includes three topics—Mega-epidemiology Research (large-scale epidemiologic studies), Health Care Delivery, and The Clinical Trial Enterprise. The first two have been the bread and butter of the CRN, familiar to us all. The third may need some explanation. The meeting materials ask the following questions: “How can the collective resources of HMORN be enhanced and leveraged to transform government-sponsored clinical trials? Can these resources create a new kind of enterprise in which practical trials can be routinely, efficiently,

and very quickly designed, implemented, and completed?” Can high levels of collaboration between HMORN centers be enhanced and leveraged to implement critically important trials targeted at patients with rare, as well as common, diseases? Increasing accrual to cancer clinical trials has been a specific aim of the CRN since its inception. But the questions above suggest a much more important and creative role for the CRN (and other HMO research networks)—to “create a new kind of enterprise” that can mount well-designed but lean studies of major prevention and clinical questions that assess the relative benefits and risks of alternative approaches in the real world of diverse patients and providers. Such trials are an essential element of the Comparative Effectiveness Research agenda. Creating such a “new enterprise” is a high priority for the CRN.

- Ed Wagner (GH), Mark Hornbrook (KPNW),  
Larry Kushi (KPNC)

## News from NCI

*Update from the CRN's Program Director*

I would like to report on a very exciting event that took place at NIH on February 2-4, 2010. This was the NIH State of the Science Conference on Enhancing Use and Quality of Colorectal Cancer Screening. The lead organizer of this event was Dr. Carrie Klabunde of our Applied Research Program. Expert presenters included CRN affiliated research sites and investigators collaborating with CRN, including Jennifer Elston Lafata, Theodore R. Levin and Ann G. Zauber. I found the conference

to be an extremely informative survey and synthesis of current knowledge and I believe that it will be influential in informing future NCI research initiatives in this important area. The conference agenda and the Statement issued by the conference committee can be found at: <http://consensus.nih.gov/2010/colorectal.htm>. A comprehensive evidence review conducted for the conference can be found at: <http://www.ahrq.gov/clinic/tp/crcprotp.htm>.

-Martin Brown (NCI)



*The Cancer Research Network (CRN) is a collaboration of 14 non-profit HMOs committed to the conduct of high-quality, public domain research in cancer control. The CRN is a project of NCI and AHRQ.*

### In this issue ...

The Cancer Prevention Index Project... page 2  
Recent Findings from CRN Scientists ... page 3  
CRN Cancer Research Meetings .. page 4  
CRN Site Profile: Cancer Research in Hawaii ... page 5

New Study in the CRN family ... page 6  
What is Dr. \_\_\_\_\_ up to? ... page 6  
Accomplishments of the Health Literacy Project Team ... page 6

# The Cancer Prevention Index Project

## Final Report from a CRN3 Study

### Executive Summary

The Cancer Prevention Index (CPI) project was a two-year study conducted as a part of the CRN 3 award. It applied a person-time methodology to evaluating cancer prevention care quality across two large health care systems—Kaiser Permanente Hawaii (KPH) and Kaiser Permanente Northwest (KPNW). The slightly modified aims of the feasibility study were to:

1. Determine the practice variation and secular trends over ten years of observation and across two large health care systems in Prevention Index (PI) screening scores. The PI is a quality measure that determines the degree to which screening practices among individuals and across clinical practices adhere to standard recommendations.
2. Determine the levels of practice variation and secular trends in the management of tobacco and of obesity over the same period. The Tobacco Disease Management Index (T-DMI) and the Obesity DMI (O-DMI) compare the relative success of clinicians in getting smokers to quit smoking and obese persons to lose weight.
3. Determine the distributional properties of the CPI secondary prevention measure.s
4. Expand the common data dictionary to include all elements required for the primary and secondary prevention CPI.
5. Develop algorithms for data extraction for all CPI primary and secondary prevention services.
6. Extract PI and DMI data from

member populations at two sites (KPH and KPNW) and conduct analyses on the relation of individual and grouped CPI measures to morbidity outcomes.

#### Services examined

- breast, cervical, colorectal, and prostate cancer screening
- tobacco and obesity management

### Investigators

#### Kaiser Permanente Hawaii

Thomas M. Vogt, MD, MPH  
Andrew E. Williams, PhD

#### Kaiser Permanente Northwest

Adrienne C. Feldstein, MD  
Victor J. Stevens, PhD  
MaryAnn McBurnie, PhD

## Results

### Practice Variation

All services showed substantial practice variation. Most, but not all, improved between 1998 and 2008, and most PI scores were slightly better at KPNW than at KPH. For all services, a few practices performed substantially better than most and a few substantially worse than most. These outliers constitute a rich resource for learning how to perform better and for identifying system problems that need correcting.

### Co-variates

For several services, there were small but significant differences in level of quality performance by primary care provider (PCP) gender and tenure of employment. Usually, longer tenure was associated with higher

performance. Gender was associated with the type of test—female providers scoring higher on breast and cervical screening and male providers scoring higher on prostate screening.

### Tobacco management

The percent of smokers in clinical practices who quit smoking during a given year ranged from close to zero up to 30% with a mean of eight to 11 percent. KPNW improved performance in this area from 1998 through 2002, apparently as a product of a large primary care tobacco research project. After 2002 when the project ended, those gains disappeared.

### Obesity management

The practice level percent of obese

smokers who lost weight (adjusting for co-morbidities and age) ranged from 26 to 72 percent with means of about 45 to 52 percent. KPNW improved substantially from 2003-2005, then fell back to pre-2003 levels. We did not identify the program responsible for this change.

### Performance measures in relation to cancer outcomes

Propensity adjusted models were applied to relate the PI and DMI performance measures to cancer stage and, for obesity and tobacco management, to incidence of the relevant cancers. We did not expect significant results from this pilot study and did not see them. However, the methodology for doing so was tested and can be applied to larger studies.

## What's next for the CPI methodologies?

1. The original plan was to write a follow-up grant to further explore and evaluate these measures. However, the National Committee for Quality Assurance (NCQA) and its Executive Vice President, Gregory Pawlson, MD have approached us hoping to conduct a joint project to test the applicability of the PI and DMI measures to Healthcare Effectiveness Data and Information Set (HEDIS) measures currently under development using electronic medical records. We have agreed to that partnership and NCQA is applying to the Commonwealth fund for the grant funding.
2. The PI methodology has been applied in a recently funded grant to monitor the relation of the quality of HIV testing and care to outcomes under the direction of Richard Meenan, PhD at KP Northwest.
3. The PI methodology is also a component of a newly funded large CRN GO grant, SEARCH (Diana Buist and Chyke Doubeni, PIs). Dr. Andrew Williams is a site PI for that grant here in Hawaii.
4. We have provided our data extraction algorithms to research groups at KP Colorado and KP Georgia so that they can carry out independent but related work.
5. The KP Hawaii group currently has two related ongoing grants in this area:
  - a. An AHRQ grant to explore the associations of screening and management of cardiovascular disease (CVD) risk to CVD outcomes.
  - b. An NHLBI grant to explore the associations of CVD and diabetes management to CVD and diabetic complications outcomes in diabetic patients.

We are strongly supportive of any group that wishes to apply this methodology.

- Tom Vogt (KPH)

# Recent Findings from CRN Scientists

*The MENU Choices team continues its publishing roll!*

The Making Effective Nutritional (MENU) Choices study, led by Christine Cole Johnson, PhD (HFHS) developed and evaluated an individually tailored, Web-based program to promote daily fruit and vegetable (F&V) consumption. Its efficacy was tested in a randomized trial of five HMOs (HFHS, HPRF, GHC, KPCO, KPGA.)

The study team, led by Gwen Alexander, reported in the February 2010 issue of the *American Journal of Public Health* that the online intervention was effective in the diverse sample of healthy adults who enrolled. All three intervention arms (untailored and tailored Web program and tailored Web program plus email support) showed early and sustained increases of more than two F&V servings per day. The untailored Web program arm was least effective. Those participating online at a higher rate had more gain in F&V servings, the retention rate was high, and reported satisfaction with the online program overall was high. The authors concluded that such programs have promise as population-based dietary intervention.

A cost analysis, led by Anna Sukhanova (KPCO) was published in the December 2009 issue of the *International Journal of Behavioral Nutrition and Physical Activity*. The team evaluated costs associated with the MENU trial and connected the findings to the study outcomes. The authors reported that providing personalized "tailored" messages and additional personalized support via email cost an additional \$12-\$115 per

participant, over the untailored web program. Incremental increases in F&V consumption associated with the email support arm were associated with considerable increases in intervention costs, suggesting that the most cost effective arm of the MENU study by servings gained was the tailored website.

An evaluation of enrollment rates and characteristics of Hispanics and non-Hispanics at a single site was published in the Winter 2010 issue of *Ethnicity and Disease*. Nikki Carroll (KPCO) led the paper. Hispanics were identified by the Passel-Word Spanish surname list. Characteristics associated with the likelihood of enrollment overall and by ethnicity were examined by logistic regression. Results indicated that identifying Hispanics through surname for oversampling can be successful in terms of sampling yield and accuracy, and that Hispanics are less likely to enroll in a web-based nutritional intervention. The authors concluded that additional research is needed to identify methods of attracting more Hispanic subjects to these kinds of interventions.

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## MENU Study in the News

In January 2010, Reuters Health ran a story on the MENU project's success in motivating study participants to increase their consumption of fruits and vegetables. For the full story, visit: <http://www.reuters.com/article/idUSTRE60648320100107>.



# CRN Site Profile

## Cancer Research in Hawaii

### The Center for Health Research-Hawaii

Kaiser Permanente's Center for Health Research, Hawaii (CHR-H) is part of The Center for Health Research (TCHR). TCHR unites the original center, CHR-NW in Portland, Oregon with CHR-H in Honolulu and CHR-SE in Atlanta, Georgia. All share a mission to improve individual health and inform health policy.

CHR-H and Kaiser Permanente Hawaii (KPH) cancer patients benefit from partnerships within and beyond TCHR. TCHR investigators can act as Principal Investigators on studies based in each other's region. Cancer researchers at the University of Hawaii's Cancer Center and other departments have full Investigator rights through their appointments as affiliate faculty or through participation in the CRN Scholars program. Kaiser Permanente Hawaii (KPH) members with cancer can participate in oncology clinical trials opened in KP's Northern California region. CHR-H is leading or contributing to seven current or recently completed multi-site CRN projects and many more through the HMORN and other research networks.

### Kaiser Permanente Hawaii

KPH employs five oncologists, 152 primary care physicians and a total of 410 fully employed physicians in serving its 226,000 members at its hospital in Honolulu and at its 17 outpatient clinics on Oahu, Maui, and Hawaii. KPH is a leader and a test bed

for evidence based innovations designed to influence physician and patient behavior. It helped develop and implement the Panel Support Tool (PST), a point-of-care

*"...to improve individual health and inform health policy..."*

decision support tool that alerts primary care physicians to care gaps including gaps in cancer screening. It is also the test region for another decision support tool driven by David Eddy's Archimedes program. CHR-H is leading the evaluation of these tools.

### Research Capacity and Current Foci

CHR-H has ready access to a diverse population, highly developed data on its health and healthcare, and strong collaborative ties to the health system that serves it. KPH has data on over 15,000 cancer cases in a database initiated in 1960. CHR-H is working to enhance the Hawaii SEER registry's value by linking comorbidity data for KPH cancer patients. KPH also contributes paraffin blocks with normal and tumor tissue to a SEER-associated research biorepository established by CHR-H affiliate faculty at the Cancer Research Center of Hawaii.

### Other CRN Activities

CHR-H was pleased to host a



*Turtle Bay, HI. Location of the first CRN meeting in 1999. Photo courtesy of Gary Ansell (KPNW.)*

productive Cancer Research Summit in November 2009. The summit took place over three days and combined an NCI site visit, a CRN site visit, an in-person meeting for the VDW SEER data-linking project, and two days of meetings and presentations devoted to fostering collaborative research.

*- Andrew Williams and Caryn Oshiro (KPH)*

*The CRN Connection is a publication of the CRN developed to inform and occasionally entertain CRN collaborators. It is produced with oversight from the CRN Communications & Collaborations Committee.*

*Oversight ... Martin Brown, Alyssa Grauman, Reina Haque, Terry Field, Deb Ritzwoller, Cheri Rolnick, Leah Tuzzio, Nirav Shah, Ed Wagner, Robin Yabroff*

*Editor ... Sarah McDonald*

*Please send comments and suggestions for this newsletter to Sarah McDonald, [mcdonald.sj@ghc.org](mailto:mcdonald.sj@ghc.org).*

## New study in the CRN family

*Two PIs, six HMOs and a percentile score of 3.0!*

The NCI has just funded a CRN-leveraged project entitled Statins & Lymphoid Malignancy Risk in a Large Multi-site Population-based Cohort. This four-year R01 study is a collaboration with investigators from six CRN sites: Christine Johnson, PhD (co-PI, HFHS), Marianne Ulcickas Yood, DSc (co-PI, HFHS), Leslie Spangler, PhD (GHC), Marsha Raebel, PharmD (KPCO), Laurel Habel, PhD (KPNC), Chun Chao, PhD (KPSC), and Douglas Roblin, PhD (KPGA). External collaborators, Joan Fortuny, MD, PhD, a European pharmacoepidemiologist, and Larry Engel, PhD, a cancer epidemiologist at Memorial Sloan Kettering, played leading roles in developing the protocol.

Using a nested case-control study design, the study team will identify lymphoid malignancies among these CRN populations. Population-based cancer registries will be used to identify new cases of lymphoid malignancies diagnosed from 1998-2007. Membership files will be used to identify controls. Pharmacy databases will be used to identify prescriptions for statins and other medications in order to assess the association between statin use and the risk of lymphoma overall and by lymphoma subtype. The secondary objective, led by Dr. Chao, is to assess the association of statin use and lymphoma risk among patients with selected predisposing autoimmune disorders. The hypothesis is that a protective association between statin use and lymphomas will be stronger for lipophilic statins and for lymphoma subtypes that are more closely related to chronic inflammation.

- Christine Johnson, Marianne Ulcickas Yood and Heather Dakki (HFHS)

## What is Dr. \_\_\_\_\_ up to?

How is the CRN accomplishing its 4th aim of increasing collaboration between CRN sites and investigators at the NCI as well as in cancer centers and other academic centers?

One way is through the CRN Scientific Seminar series. In this forum, CRN investigators and staff present completed studies and works in progress, get valuable feedback from colleagues and learn about each other's work.

Here's what one attendee had to say about the seminar presented in February 2010 by Doug Roblin (KPGA) and Deb Ritzwoller (KPCO), titled "Insurance Benefit Design and Receipt of Cancer Prevention and Screening Services":

*I really enjoyed the webinar Doug*

*"...the seminar highlighted some really important issues..."*

*and Deb presented. At Group Health, Diana Buist and I are working on an unrelated study on mammography adherence, and the seminar highlighted some really important issues that everyone should think*

*about when looking at screening adherence.*

*We've already had one call with Doug and Deb to talk over our shared issues and we hope to chat again when we are all in Denver for the CRN research summit in May.*

*- Erin Aiello Bowles (GHC)*

CRN Scientific Seminars are offered every 3rd Wednesday from 1:00-2:00 p.m. Pacific. For registration information, or if you'd like to present your work, contact Sarah McDonald, [mcdonald.sj@ghc.org](mailto:mcdonald.sj@ghc.org).

## Accomplishments of the Health Literacy Project Team

The CRN's **Health Literacy** project, led by Kathy Mazor (MPCI) is developing a test of comprehension of oral (i.e., spoken) messages about cancer prevention and screening. The study team is making great progress on its aims and is moving into publication mode. Two project team members, in addition to their work on this project, have made significant progress toward their educational goals.

**Bridget Gaglio**, site investigator for KPCO, recently completed her PhD at the University of Colorado through the Department of Health and Behavioral Sciences. Her dissertation is entitled: "Assessing Health Literacy and Health Information Needs for

Individuals at Risk for Cardiovascular Disease." Congratulations, Bridget!

**Rebecca Cowan**, project manager for KP Hawaii, is a doctoral candidate in Argosy University Hawaii's clinical psychology program. She passed her comprehensive exams last summer and is now finishing up her last class in the program. Her next steps are to work on her clinical research project (equivalent to a dissertation) and to start an internship. Keep up the great work, Becca!

*Interested in cancer communication research? Attending the HMORN conference? Check out the Health Literacy Focus on Oral Communication open session, Sunday March 21, 4:00-5:00 p.m.*