identify strategies to help maintain or enhance CRC survivors' HRQOL. **Methods:** Mail survey and focus groups. Subjects were 283 ostomy and 392 anastomosis long-term CRC survivors within an HMO. Focus groups for subjects with ostomy were divided by gender and high and low HRQOL. Outcome measures were the modified City of Hope Quality of Life (mCOH-QOL)-Ostomy (abridged for anastomosis) and SF-36v2 questionnaires. The SF-6D scoring algorithm was used to calculate an overall HRQOL score from SF-36v2 data. Focus groups were conducted to explore ostomy-related barriers to effective self-care and adaptation strategies. **Results:** CRC survivors with an ostomy experienced multiple persistent HRQOL losses that differ between men and women. Women CRC survivors with ostomies, for example, reported more sleep disruption and fatigue than men. Living with an ostomy, co-morbidities, socioeconomic status, self-reported depression, and employment status were independent predictors of SF-6D scores. Among CRC survivors with ostomy, fistulas had important implications for HRQOL. Psychological wellbeing among CRC survivors was positively associated with income. Intestinal stomas significantly influenced spiritual HRQOL. Provision or withdrawal of a partners' support affected both short- and long-term psychosocial adjustment of female CRC ostomy patients. Focus group participants identified dietary changes to control bowel output and odor, demands of coping and adjustment, and the time it took to accept the reality of daily living with an ostomy as significant challenges. **Conclusions:** The greatest challenges reported by CRC survivors confirmed the IOMs findings that survivorship is a distinct, chronic phase of cancer care, and that cancer effects are broad and pervasive. CRC survivors could benefit from dietary and behavioral interventions even 5+ years after their cancer surgery. Women with ostomies seem to do worse than men with ostomies and report a different profile of HRQOL challenges, including sleep disruption and fatigue. Depression screening and psychosocial interventions should be part of survivorship care for CRC patients. CRC survivors should be assessed for income and financial need. Survivorship care should aim at minimizing hospitalizations, depression, and ostomy-related complications among long-term CRC survivors.

C-C4-03:

Examination of the Use of First-Line Chemotherapy Regimens for Colorectal and Lung Cancer: Impact of Patient Characteristics

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Background: Chemotherapy has been shown to improve both response and survival rates for patients with cancer. As chemotherapy treatments become more costly, these improvements in survival are coming with a substantial price tag. The financial burden of chemotherapy is forcing both patients and health plans to make difficult decisions regarding cancer treatment. Historically, most HMOs have provided comprehensive cancer care with limited, fixed co-payments. However, in recent years, HMOs have begun to implement benefit design packages that increase patient cost-sharing for cancer care services. **Aim:** To examine the variation in lung and colorectal cancer patients who receive first choice cancer chemotherapy services as defined by American Society of Clinical Oncologist (ASCO)-derived guidelines, which are currently employed by all Kaiser Permanente (KP) regions. The variation in first choice cancer chemotherapy regimen use by stage, age, gender, and variables capturing differences in benefit design is also examined. **Methods and Study Design:** This is a retrospective, observational study of the rates of chemotherapy regimen use for a cohort of HMO cancer patients at two KP regions, Colorado and Georgia. Algorithms were built based on ASCO guidelines, to identify the more than 20 cancer chemotherapy regimens that are based on cancer site (lung vs colorectal), stage, and morphology. These algorithms were mapped to National Drug Codes (NDCs) and patient specific utilization was extracted from legacy pharmacy systems and the Virtual Data Warehouse (VDW) files. A time series for the period 2006–2008 with month-by-month measurement of the proportion colorectal and lung cancer patients who receive first choice cancer chemotherapy services, along with variables denoting variation in patient and tumor characteristics and benefit design, was built. Statistical analyses describing variation were conducted. **Results:** Preliminary findings suggest that variation exists within and across the two health plans and by cancer site and stage. Also, variation in the use of first-choice cancer chemotherapy services may be impacted by recently implemented increases

in patient costsharing. **Conclusions:** Additional analyses are required to further investigate the impact of patient cost-sharing and injectable/infusion coinsurance.

C-C4-04:

Trends in Breast Cancer Incidence in a Setting of Increased Mammography Screening and Decreased Use of Oral Estrogen Replacement Therapy

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Background: Utilization of estrogen hormone replacement therapy (HRT) has dropped dramatically since the publication of the Women's Health Initiative findings questioning its use for prevention of chronic conditions. Recent publications have suggested a link between this drop in HRT use and a parallel drop in breast cancer. **Methods:** Maccabi Healthcare Services provide services to nearly 1.8 million members. We tracked estrogen use, mammography screening utilization, and breast cancer diagnoses in a cohort of female members from 2000 to 2006. Inclusion criteria were: age 45 and over on 1/1/2000, active HMO member from 1/1/2000 until death or 12/31/2006, no history of breast cancer prior to 1/1/2000. We used a Cox proportional hazards model to estimate the contributions of mammography screening, age at the start of the study period, and use of oral estrogen therapy on breast cancer risk. **Results:** The study cohort consisted of 168,732 women, of whom 35,606 (21.1%) purchased oral HRT, 116,373 (69%) had at least one screening mammogram, and 3,939 (2.3%) were diagnosed with breast cancer between 1/1/2000 and 12/31/2006. The percent of women undergoing screening mammography was 16.7% in 2000 and peaked at 34.3% in 2005. The proportion purchasing estrogens dropped from 14.4% in 2000 to 5.0% in 2006. Annual cancer incidence was 3.2/1000 in 2000, and peaked at 3.5/1000 in 2006, in parallel with the peak in mammography screening. A Cox proportional hazards model including an interaction term for mammography* oral estrogen use indicated a significant positive association of mammography screening (HR 6.96, 95% CI 1.305 – 1.042), oral HRT (HR 2.0, 95% CI 1.32 – 2.90) and age (HR 1.035, 95% CI 1.035 – 1.042) on cancer incidence. **Discussion:** We detected an increase in cancer incidence concurrent with and following a rapid decline in HRT use. Our findings demonstrate the competing impacts of increased mammography screening and decreased HRT use on breast cancer incidence and underscore the value of person-level analysis in assessing such trends. Future work will focus on the impact of estrogen-only and estrogen-progestin, and characterize the effects of HRT estrogen receptor-positive and -negative cancers.

PS2-01:

A Multimodal Reminder Program Improves Routine Mammogram Screening Rates

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Background/Aims: This retrospective cohort study evaluated the effectiveness of implementation and maintenance phases of a multimodal reminder program to improve routine mammography screening. **Methods:** The program used automated reminder calls and was conducted at Kaiser Permanente Northwest, a nonprofit group-model HMO with an electronic medical record. Study participants were women HMO members aged 42 or older who were 20 months past their last mammogram (index date) during three time periods: pre-reminder (2004), post-reminder implementation phase (2006), and post-reminder maintenance phase (Jan 1–July 1, 2007) (Total n=35,104). The program targeted women aged 50–69 with a mammogram due followed by post card, followed by up to 2 automated phone calls and 1 live call for non-responders. Women aged 42–49 (for whom clinical guidelines also recommend mammography) receiving no reminders constituted the primary comparison group (CG 1). The primary outcome was time until mammogram in the 10 months following the index date. **Results:**

Pre-reminder, 63.4% of targeted women completed a mammogram; this number increased to 75.4% in the post-reminder implementation; 80.6% completed a mammogram in the maintenance phases. After controlling for demographics and clinic visits, intervention women were 1.51 times more likely to complete a mammogram (CI 1.40–1.62) post-reminder implementation, compared to CG 1. The effect was maintained in 2007 (HR 1.81 [CI 1.65–1.99]). Women of other races (Asian, Pacific Island, or Native American) were less likely to complete a mammogram, as were those taking a greater number of medications. Women with a college education, who were married, or who had visited a primary care provider or gynecologist during follow-up were more likely to complete a mammogram. **Conclusions:** We found that a multimodal reminder system could be effectively implemented and maintained in a large health system. If widely implemented, this intervention could substantially improve community mammography screening rates. Insured patients who are sicker, or who are of Asian, Pacific Island, or Native American descent may need more support to complete screening. Future studies should address practice-based factors that assist patients in completing mammograms, as well as other factors that affect the reach and cost-effectiveness of delivering the intervention to diverse patient groups.

PS2-10:

The CRN Cancer Communication Research Center

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We propose an integrated set of three, large posters that will describe the main components of a new research center that bridges HMORN institutions. **Background:** The CRN Cancer Communication Research Center (CCRC) was established in September 2008 at Kaiser Colorado Institute for Health Research. **Objectives:** The CCRC's objectives are to discover the most promising practice-based approaches to cancer communication and care coordination, and to disseminate those approaches. Integrated care delivery systems represent promising opportunities to study these approaches, and the CRN CCRC, with its embedded organizational focus will take advantage of the CRN as a virtual laboratory. **Specific Aims:** The CRN CCRC 1) leverages the existing infrastructure of the CRN to support both the discovery and dissemination of practice-based communication strategies and organizational resources; 2) supports four investigator-initiated research projects to advance communication theory and to evaluate strategies informed by theory; and 3) provides administrative, financial, and scientific support to new investigators, including clinicians, in the development of pilot projects, and assists in submission of broader, investigator-initiated proposals to be submitted for extramural funding. **Methods:** Two R01-scale investigator initiated research projects will advance and test communication theory. The first will: characterize patients' and providers' experiences communicating about errors in cancer care; investigate the health system factors that promote or inhibit effective communication; and develop, disseminate, and evaluate provider training materials and patient informational materials. The second will develop and test an intervention to decrease patient uncertainty and improve psychosocial and communicative outcomes during the period from suspicion of cancer through diagnosis and plan of care. The Center's research projects will be augmented and supported by Shared Resource Cores. The Discovery Core will identify the most promising practicebased innovations and approaches; the Dissemination Core will focus on data harmonization and applying dissemination science to effective interventions.

PS2-25:

Provider Perspectives on Essential Components of a Cancer Survivor Care Plan

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Background: This presentation is based on efforts of the Minnesota Cancer Alliance (MCA), a coalition of more than 80 groups and individuals, to improve quality of life for cancer survivors in Minnesota. The MCA is currently developing a comprehensive and userfriendly SCP based on feedback regarding limitations of existing survivorship care plan (SCP) tools. As a first step, a needs assessment of health care providers was conducted regarding essential elements. Aims: To report on components providers wanted incorporated into the tool as well as methods to promote SCPs. **Methods:** In April 2008, participants (e.g., oncologists, primary care providers, nurses, social workers, community health workers) of a working session on SCPs provided feedback on desired components and strategies for communication and promotion. **Results:** A total of 59 health care professionals participated. Treatment given, possible side effects and a follow-up plan were considered the fundamental information needed. Participants wanted a separate psychosocial section which would include information on emotional, spiritual, sexual and economic issues (e.g., work) as well as the ability to document the survivor's support system and any social support services used. A section on family history and genetic counseling/testing was deemed important as well as a section for documentation of other comorbidities. Participants indicated that use of the SCP tool should begin at diagnosis and provide information for both short and long-term survival. **Conclusions:** Feedback obtained from providers indicated that not only were treatment history and side effects important components of a SCP, but addressing the survivor as a whole person and as part of a family system (i.e., psychosocial section, family history and genetic testing, comorbidity section) was crucial. Survivors need information along the entire continuum of cancer care and health care professionals could benefit by a user-friendly process to convey information to their patients and their caregivers. Identifying the needs of health care providers regarding the essential elements of a SCP will help meet patient needs, potentially improve patient care and may help ensure greater use of the SCP among providers.

PS2-27:

Identification of Patients With Nonmelanoma Skin Cancer Using HMO Claims Data

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Background: Despite the large population affected, the epidemiology of nonmelanoma skin cancer (NMSC) is understudied, and U.S. cancer registries often exclude NMSC. Secondary data analysis has been limited in that squamous cell (SCC) and basal cell carcinoma (BCC) do not have their own unique International Classification of Disease (ICD-9) identifiers. Our aim was to define and compare algorithms for identifying NMSC by secondary analysis using a computerized database of a large health maintenance organization (HMO). **Methods:** A computerized claims database of a large HMO in Southeastern Michigan was used to identify NMSC patients who were diagnosed between January 1, 1988 to December 31, 2007. Three algorithms were examined: NMSC ICD-9 codes, Current Procedural Terminology (CPT) code for treatment of malignant NMSC, or both ICD-9 and CPT codes. A subset of charts for the overall cohort and all charts from 2007 HMO-enrollee members only were reviewed to verify NMSC diagnosis. Positive predictive values were calculated. **Results:** Analyses of data from 1988–2007 identified NMSC in 165,000 patients using ICD-9 codes, 44,875 patients by CPT codes and 113,666 patients who had both codes. A random sample of 1275 cases were selected for chart review to verify NMSC, which was validated in 73.7% of ICD-9 identified patients, 94.6 % of CPT identified patients, and 97.5% of patients identified using both codes. Data was then limited to HMO-health plan