modified the message; 14.2% added to or reframed the existing personalizing words (e.g., adding “because I love you”), 10.3% (45/434) added urgency to the message (e.g., “please don’t delay”) and 8% (35/434) added reassurance (e.g., “It’s really not that bad”). Almost one in five (18.3%; 80/434) deleted a negatively framed sentence on colon cancer risks. In 46.5% (195/434) of cases, the meaning of at least one sentence was changed but only 2.7% (12/434) created messages with factual inaccuracies. **Conclusions:** Modifiable messages transmitted within a social network offer a way for screened individuals to promote CRC screening. Further study is needed to identify the optimal combination of user-generated content and pre-written text, allowing for creation of messages that are acceptable to senders, persuasive, and factually accurate.

Keywords: Communication; Cancer Screening; Social Network
doi:10.3121/cmr.2013.1176.a2-3

A2-4:

Preventive Health Service Use Among Colorectal Cancer Survivors Compared to Age- and Gender-Matched Controls

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Background/Aims: Because of advances in early detection and treatment, many colorectal cancer (CRC) survivors now live for decades. Among survivors, the mortality risk from co-morbid conditions—particularly cardiovascular disease—exceeds the risk from cancer, making the receipt of routine preventive health services important in the survivor population. To date, our knowledge of preventive service use among cancer survivors, especially survivors aged <65 years, remains in its infancy. Using a case/control design, we evaluate receipt of preventive health screenings among HMO-insured CRC survivors. **Methods:** Tumor registry data available within four geographically diverse HMOs were used to identify CRC cases aged ≥50 years diagnosed with non-metastatic disease and treated with curative intent between 1/1/2000 and 12/31/2008. Age and gender distribution-matched controls without a cancer diagnosis were also identified and assigned a pseudo-diagnosis date. HMO administrative and encounter data were used to identify insurance coverage and treatment dates, and socio-demographic and health care use information. Cases and controls, stratified by age (<65 vs. ≥65), were followed annually for up to five years post-treatment. Differences in annual service use between cases and controls were evaluated using chi-square tests. **Results:** We identified N = 561 cases and N = 5,114 controls aged <65, and N = 1,268 cases and N = 13,720 controls aged ≥65. Forty six percent of both cases and controls aged <65 and 52%/53% of cases/controls aged ≥65 were female. In the first year following treatment, cases aged <65 were significantly ($P < 0.01$) more likely to use colorectal and cervical cancer screening compared to controls (59 vs. 18%, and 87 vs. 76%, respectively), but significantly less likely to undergo cholesterol testing (30 vs. 48%). An identical pattern was observed among cases aged ≥65 (47 vs. 18%, 93 vs. 79%, and 39 vs. 50%, respectively). Regardless of age, no differences were detected in use of mammography or bone densitometry among female cases and controls. These same differences and similarities persisted through the third year of follow up. **Conclusions:** CRC survivors, regardless of age, receive recommended preventive health screenings, particularly cancer screening, at rates equal to or exceeding non-cancer controls. However, CRC survivors are less likely to receive cholesterol screening, potentially increasing their risk of cardiovascular-related morbidity.

Keywords: Cancer Survivors; Preventive Health Services
doi:10.3121/cmr.2013.1176.a2-4

A2-5:

Factors Independently Associated with Receiving First-Line Bevacizumab for Advanced Non-Small Cell Lung Cancer

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Background/Aims: Bevacizumab has FDA approval for advanced stage (IIIB/IV) non-small cell lung cancer (NSCLC) treatment; however, little is known about its uptake and use in HMOs. The aim of this study was to examine bevacizumab use over time in 4 Cancer Research Network (CRN) HMOs and identify factors associated with its use. **Methods:** Patients aged ≥21 years with stage IIIB and IV NSCLC diagnosed between 2005-2010 at 4 CRN sites who received first-line carboplatin-paclitaxel with (CPB) and without bevacizumab (CP) were included in this retrospective cohort study. Information on patients’ comorbidity burden, sociodemographic, tumor, and chemotherapy treatment characteristics over time were obtained from the site’s Virtual Data Warehouse. Patient information was contrasted between CPB and CP patient groups using chi-square tests of association and t-tests/rank sum tests for nominal/ordinal and interval-level factors, respectively. Factors with a $P < 0.2$ in the bivariate analyses and patient sex were included in a multivariate logistic regression model to identify factors independently associated with receiving first-line CPB with adjustment for the clustering of study site. Interactions of age and stage with other factors were assessed. **Results:** A total of 1109 patients were included with 198 (18%) and 911 (82%) in the CPB and CP groups, respectively. Patients who received CPB were more likely than patients who received CP to be younger with lower comorbidity burdens, well/moderate differentiated tumors, non-small cell carcinoma morphology, and diagnosed in the later years of the study (all $P < 0.05$). Receiving CPB was associated with a non-small cell carcinoma morphology (OR = 1.84, 95% CI 1.21-2.80), well/moderate differentiated tumor (OR = 1.76, 95% CI 1.14-2.74), and diagnosis year (OR = 1.17, 95% CI 1.06-1.30) while inversely associated with age at diagnosis (OR = 0.96, 95% CI 0.95-0.98) (c-statistic = 0.738). No interactions were associated. **Conclusions:** Bevacizumab use in CRN patients with NSCLC was limited but uptake was associated with younger age and tumor factors, and increased over time. The patterns of CPB use in the CRN are consistent with published data that suggest little clinical advantage of bevacizumab in NSCLC patients ≥65 years and where approximately 2/3 of NSCLC patients are diagnosed at ≥65 years.

Keywords: Lung Cancer; Chemotherapy; CRN
doi:10.3121/cmr.2013.1176.a2-5

PS1-3:

Perceptions of Cancer Screening Messages in the Media: How Do Patients Make Sense of Conflicting Messages in the Popular Media Around Cancer Screening?

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Background/Aims: Americans are continually exposed to a message in the popular media that more healthcare services leads to better health. With respect to cancer screening, evidence-based guidelines on breast and prostate cancer screening run counter to a similar prevailing message in the popular media, which often encourages patients to “do their part” and screen for the disease. While considerable resources have been invested in the development of evidence-based decision aids (DAs) – patient education tools providing unbiased information about potential options and outcomes of a medical decision – patients may find these tools counter-intuitive because the evidence presented is often in direct contradiction to popular media depictions. Through focus groups and stimulus materials, this study investigated the influence and impact popular media has on medical decision-making for breast, colorectal and prostate cancer screening. **Methods:** Eighteen focus groups were conducted in the San Francisco Bay Area. Participants attended a group focused on screening for one of 3 cancers and completed a brief socio-demographic questionnaire. Using popular media stimulus materials and DAs, the researcher-facilitated discussions explored participants’ perceptions of and motivations to participate in cancer screening. Audiotapes of discussions were transcribed and analyzed to identify salient themes. **Results:** Ninety-two diverse participants recruited from the community participated in one of 18 focus groups (6 per condition). The average age of participants was 53, with slightly more women (55%) than men (45%). Most participants reported Caucasian ethnicity (62%) and had graduated from college (51%). Participants overwhelmingly trusted the DA over popular media stimulus materials. In deliberating the decision of whether to screen, participants drew upon their (a) personal experiences with

providers and the healthcare system, (b) personal experiences with cancer, (c) trust in a particular media source, and (d) ability to pay for screening tests. **Conclusions:** Media messaging about cancer screening yielded very little influence on the decision to undergo screening. Rather, when presented with a DA, patients were more likely to place trust in that source, particularly if provided by a doctor. These data suggest a need for greater distribution of evidence-based decision support tools to aid patients in making decisions about cancer screening.

Keywords: Cancer Screening; Media; Cancer Education
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PS1-4:

The Nature of Social Support on Breast Cancer Patients' Treatment Decision-Making

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Background/Aims: With the advent of patient-centered approaches to care, much attention has been directed towards engaging patients in their own care. Healthcare providers seek to achieve this through communication about and inclusion of their patients' values and preferences under the rubric of shared decision-making (SDM). However, few studies have investigated the role a patient's social support network (e.g., family members or friends) may play in medical decision-making or considered how discussions outside of the clinical consultation can affect a patient's treatment decisions. Drawing on interviews with oncology care providers, breast cancer advocates, and women newly diagnosed with breast cancer in Northern California, this study investigated how members of a patient's social support network can influence treatment decision-making for breast cancer. **Methods:** In-depth interviews were conducted with (1) oncology care providers and breast cancer advocates, and (2) breast cancer patients at four time points throughout their treatment journey, to explore the influence of others on treatment decision-making. At each interview, patients completed questionnaires assessing health-related quality of life (HRQOL), role preferences, and treatment satisfaction. EHR abstraction and observational field notes augmented patient interview data. Interview data were coded to identify recurrent themes across all interviews and frequency distributions for questionnaire data were calculated using IBM SPSS Statistics 20. **Results:** We conducted 20 in-depth interviews with oncology care providers and breast cancer advocates, and over 150 interviews with 41 breast cancer patients. We report on care providers' observations of and experiences with members of their patients' social networks in treatment decision-making. We also describe how patients themselves consider the involvement of others in their treatment decision-making, identifying several areas of decisional influence. **Conclusions:** Our interviews illustrate how the current healthcare delivery structure rarely acknowledges the circles of care that can influence decision-making. Lack of attention to the influence a patient's social support network can have on treatment decision-making may lead to sub-optimal decision-making because these influences are not adequately understood by clinicians. Our findings suggest that patient-centered care and patient engagement must go beyond the dominant dyadic models of patient and provider and include an understanding of the influence of others in patients' treatment decision-making.

Keywords: Breast Cancer; Decision Making; Social Support
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PS1-5:

The HMO Cancer Research Network: Evolution and Current Organization and Activities

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Background/Aims: The HMO Cancer Research Network (CRN), continuously funded since 1999 through NCI cooperative agreements, provides support for cancer research in non-profit integrated health care delivery systems. Previously, the CRN included core research projects as a major activity. In its recent renewal, the CRN evolved into an infrastructure-

only grant, with a major focus on promoting and facilitating collaborative cancer research in these settings. **Methods:** The CRN setting has characteristics that result collectively in a unique resource for epidemiologic and health services research. These include scientists with expertise in conducting public-domain cancer research in these settings; defined populations with a combined membership of ~8.5 million; clinical and administrative data systems that capture most aspects of care; archived biologic or biopsy specimens for many members; development and implementation of common data elements in the Virtual Data Warehouse (VDW) to support collaborative, multi-institutional research; and access to clinicians and administrators to facilitate translation of research findings to practice. **Results:** The CRN is led by a Steering Committee with scientists from each CRN institution with a smaller Executive Committee leadership team. With the latest renewal, CRN activities are being modified and enhanced in several areas: establishing an Informatics Core for continual improvement of the VDW's data model and data elements for cancer research, and implementation of distributed query tools to facilitate preparatory-to-research inquiries and collaborative research studies; institutionalizing a CRN Scholars mentored career development program; continuing a Developmental and Pilot Studies Program; and implementing an Outreach and External Collaborations Core to facilitate research collaborations among CRN scientists, investigators at other institutions, and clinical and operations partners. In this renewal, the CRN has also established Scientific Working Groups (SWGs) to promote collaborative research in key areas: Prevention and Screening; Prognosis and Outcomes; Health Care Quality and Cost; and Communications and Dissemination. These Cores, Programs, and SWGs are co-led by scientists at CRN and affiliated institutions. **Conclusions:** The CRN enables and facilitates researchers' development of innovative multi-site, multi-disciplinary cancer research projects in the integrated delivery system setting, and motivates continued evolution of the CRN institutions as the nation's premier learning healthcare systems.

Keywords: Infrastructure; Multi-Institutional Research
doi:10.3121/cmr.2013.1176.ps1-5

PS1-6:

The Cancer Research Network: Creating New Possibilities for Cancer Prevention and Improved Cancer Outcomes

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Background/Aims: Prevention and early detection can greatly reduce cancer-related morbidity and mortality, yet little is known about how well many interventions perform in large populations and the extent to which implementation failures might be remediable. **Methods:** The NCI-funded Cancer Research Network (CRN) (U24CA17154) continues to build infrastructure for multi-site collaborations. The CRN provides unparalleled opportunities for conducting innovative cancer prevention and cancer screening research. **Results:** Advantages of the CRN include: (1) A large, diverse, membership of approximately 8.5 million individuals for studying prevention and screening across population subgroups in community-based settings. (2) Close ties to CRN health plans whose systems and providers can be intervention targets critical to the success of prevention and screening efforts. (3) Access to the primary care setting enabling study of patient-provider decision making regarding prevention and screening behaviors. (4) Longitudinal data on screening contacts, interventions, and outcomes providing a unique opportunity to evaluate "real-world" screening and prevention, and a means of identifying potentially modifiable failures. (5) Biological samples of biopsies archived for many members. (6) Nationally-recognized leaders in cancer prevention and screening. The CRN investigator-led research portfolio includes expertise in tobacco control, dietary interventions, cancer screening and early detection. (7) Long-term relationships among CRN internal and external scientists to create efficient collaborations. CRN partnerships include the HMO Research Network, NCI-designated cancer centers, federal agencies, and numerous academic institutions. **Conclusions:** Achieving national goals for reducing the burden of cancer will require new knowledge about how to optimize existing strategies for prevention and screening; new research focused on biologic, behavioral, pharmacologic, and molecular risk factors; and evaluation of the