

DCCPS Fellows Symposium 2023
Abstract and Biosketch for Fellows Poster Session

**Title:** *Romantic partners’ dyadic coping, emotion co-regulation, and cancer risk behaviors***Jennifer Bowers, Ph.D., M.P.H**. (Basic Biobehavioral and Psychological Sciences Branch, BRP)**Co-authors:** Chloe Huelsnitz, Ph.D., M.P.H. and Laurel Gibson, Ph.D. and William Klein, Ph.D. and Amanda Acevedo, Ph.D. and Tanya Agurs-Collins, Ph.D., and Rebecca Ferrer, Ph.D.**Mentor:** Rebecca Ferrer, Ph.D. (Basic Biobehavioral and Psychological Sciences Branch, BRP)

**BACKGROUND:** Research has shown that regulation of emotions and depressive symptoms have influences on cancer-related health behaviors such as dietary intake and alcohol consumption. However, significantly less research accounts for romantic partner influence. Data from the Relationships, Risk Perceptions, and Cancer-Related Behaviors during the COVID-19 Pandemic (R2C2) project was used to understand how dyadic coping between and among romantic partners may contribute to diet- and alcohol-related behaviors. **METHODS:** This study analyzes two timepoints of adults’ dyadic self-reported survey data, collected between October 2021–June 2022. Participants and their partners were recruited and compensated through Prolific.co. Multilevel modeling was used to examine how behavioral coping using health risk behaviors (e.g., junk food, alcohol) and depressive symptoms at are longitudinally associated with dietary intake and alcohol consumption one month after the initial survey assessment. Moderators of interest include partner-encouraged behavioral coping, partners’ behavioral coping, regulating one’s emotions, and the management of stress and coping within the relationship. Age, food insecurity, US/UK residence, and length of romantic relationship were used as covariates. We obtained complete, quality-checked data from 194 dyads. **RESULTS/CONCLUSIONS**: Dyadic multi-level models indicated that actors’ reports of eating junk food (candy, cookies, chips, fries, etc.) were predicted by their food insecurity (p < .01), and an interactive effect (p=.05) of their behavioral coping (i.e., eating when upset) with partner-encouraged behavioral coping (i.e., partners’ suggesting eating junk food when the actor has had a bad day). Actors’ reports of alcohol intake (the number of days in the past week) were predicted by their behavioral coping (i.e., drinking when upset; p < .001), and partner-encouraged behavioral coping (i.e., partners’ suggesting drinking alcohol when the actor has had a bad day; p < .01). Romantic partners can engender a significant influence on health behaviors, over and above individual variables such as depressive symptoms; further dyadic health behavior research is warranted.

**BioSketch**: Jennifer Bowers, Ph.D., M.P.H., is a Cancer Prevention Fellow in the Basic Biobehavioral and Psychological Sciences Branch. Jen’s research focuses on social psychological factors involved in cancer prevention, such as perceived risk, social influence, and self-perceptions. Her primary area of expertise from her graduate school training is skin cancer prevention among young people. Within this topic, Jen has conducted studies of acculturation, stigma, self-affirmation, indoor tanning population trends, and the self-perceptions of former indoor tanners. During her fellowship, she has worked with her mentor and teams of fellows to develop projects that involve a wide range of cancer-related health behaviors and cognitions, including projects examining romantic couples’ cancer-related health behavior, the influences of social media videos on young people’s health attitudes, cancer-related cognitive impairment, weight stigma, and cancer prevention and control among people with disabilities. In her first year of the Cancer Prevention Fellowship, Jen earned a Master of Public Health degree in Applied Biostatistics and Epidemiology from the Yale School of Public Health. She earned a Ph.D. in Social and Health Psychology from Stony Brook University in 2020. Jen holds a bachelor’s degree in psychology from Rivier University. Her mentor is Rebecca Ferrer.

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**Title:** *Demonstrating the value of rehabilitation in the context of cancer care delivery: A works-in-progress presentation*

**Rachelle Brick, PhD, MSPH, OTR/L** (Basic Biobehavioral and Psychological Sciences Branch, BRP)

**Mentors:** Paige Green, PhD, MPH (Branch Chief, Basic Biobehavioral and Psychological Sciences Branch, BRP) and Michelle Mollica, PhD, MPH, RN, OCN (Deputy Director, Office of Cancer Survivorship)

**OVERVIEW:** To describe two works-in-progress studies intended to advance our understanding of the impact of rehabilitation services on the delivery of quality cancer care. **BACKGROUND:** Across the cancer care continuum, cancer survivors often experience cancer-related disability that results in limited functioning in self-care, work, usual activities, and mobility. Cancer-related disability is associated with unanticipated hospitalizations, chemotherapy toxicity, and shorter survival. Cancer rehabilitation services, such as occupational and physical therapy, deliver interventions to prevent, mitigate, or remediate cancer-related disability. Yet, referral to cancer rehabilitation is not a standard component of cancer care delivery. This, in part, has led to limited evaluation of current patterns of rehabilitation access and delivery, as well as potential downstream effects on quality metrics, like survival. **METHODS:** This works-in-progress presentation will describe two projects examining patterns of cancer rehabilitation utilization and their association with survival. The first project will describe the analytic approach to capture frequency of rehabilitation utilization in survivors of childhood cancer, factors associated with use of these services, and impact on survival using St. Jude Lifetime Cohort Study. The second project will overview methods to quantify rates of rehabilitation utilization among older adults with lung cancer, variation in rehabilitation interventions billed for, and estimate the association between receipt of rehabilitation services and survival using SEER-Medicare data. **RESULTS:** Preliminary analyses of the SJLIFE study are underway.The SEER-Medicare proposal is currently under development.  **DISCUSSION:** This presentation will review the methodological approach for each project and preliminary analyses related to the SJLIFE study. The anticipated outcomes of these projects will inform the value of rehabilitation services in cancer care delivery by 1) identifying vulnerable populations in need of receiving rehabilitation services; and 2) providing foundational evidence linking rehabilitation services with quality metrics of cancer care.

**Biosketch**: Rachelle Brick, Ph.D., M.S.P.H., OTR/L, is a Cancer Prevention Fellow in the Basic Biobehavioral and Psychological Sciences Branch of the Behavioral Research Program. Dr. Brick's research examines the influence of access and delivery of cancer rehabilitation services on cancer survivorship outcomes. She is also interested in examining biological and behavioral factors associated with accelerated aging in cancer survivors. Prior to joining NCI, Dr. Brick worked clinically as an occupational therapist with a specialty in cancer-related cognitive impairment. Her previous work focused on using qualitative and quantitative approaches to develop interventions addressing disability in older cancer survivors. Dr. Brick received her M.S.P.H. from the University of Miami Miller School of Medicine, her Ph.D. from the University of Pittsburgh School of Health and Rehabilitation Sciences, her M.S.O.T. from Boston University Sargent College, and her Bachelor of Philosophy degree from the University of Pittsburgh.

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**Title:** *Abstraction and utilization of chemotherapy regimens within the National Childhood Cancer Registry (NCCR)*

**Coy Austin Fitts, PharmD** (Surveillance Informatics Branch, SRP)

**Co-authors:** Nicole M. Wood, DO and David H. Noyd, MD, MPH and Elaine M. Fan, MD and Jeremy L. Warner, MD, MS and Wayne H. Liang, MD, MS.

**Mentor:** Betsy Hsu, PhD, MPH (Chief of the Surveillance Informatics Branch, SRP)

**Background:** The National Childhood Cancer Registry (NCCR), as part of the Childhood Cancer Data Initiative (CCDI), seeks to connect childhood cancer data from heterogenous sources, including Real World Data (RWD) from central cancer registries and electronic health records (EHRs), to enhance pediatric cancer surveillance and research. However, a major challenge is inferring which treatment regimen patients received outside of clinical trials using RWD. In collaboration with the NCCR, HemOnc.org is expanding its pediatric regimen content to improve the resource’s usefulness for NCCR, CCDI, and the wider cancer data science community. Our objective is to describe pediatric cancer regimen abstraction for HemOnc.org in support of the NCCR. **Design/Method:** The clinical team prioritized regimen abstraction based on current and historical clinical relevance, real world analytics from EHRs and cancer registries, recency, availability of published regimen details, and other factors. Actively enrolling research protocols were excluded. Treatment details abstracted include chemotherapies, radiotherapies, and supportive care if applicable. After regimens are published to the HemOnc.org website, a parser then extracts regimen content into an openly available computable OMOP ontology, allowing reuse by other data systems. **Results**: As of January 2023, HemOnc.org contains over 900 content pages, over 250 disease pages, and over 4,000 adult and pediatric cancer regimens. Since 2021, we have abstracted over 70 pediatric regimens, arms, and variants, including 27 leukemia/lymphoma regimens, 19 sarcoma regimens, and 15 neuro-oncology regimens, amongst others. **Conclusion:** Effective reuse of real-world treatment data from cancer registries and EHRs requires a computable chemotherapy regimen resource. Our work in building pediatric cancer regimen content within HemOnc.org is vital for the future of data-driven pediatric cancer surveillance and research. Work is ongoing to improve the depth and quality of this community resource, and engagement and participation by the wider childhood cancer community is welcome**.**

**Biosketch:** Austin Fitts, PharmD, is a Cancer Research Training Award (CRTA) fellow in the SRP Surveillance Informatics Branch, where he is primarily working on the harmonization of data provided to the National Childhood Cancer Registry. Before joining SRP, he was a pharmacy student and basic science researcher at the University of Mississippi School of Pharmacy. His research focused on the development of nanodelivery devices for chemotherapies. Upon graduation, he completed two years of post-graduate residency with the second year focusing on informatics at Vanderbilt University Medical Center. While there, he worked on the real time prescription benefits program, which pulls real time insurance information at the point of prescribing, allowing providers to see alternative medications that might be more cost effective for their patients. Additionally, he serves as the editor of clinical pharmacology on the HemOnc.org editorial board. His primary work with HemOnc.org is the abstraction of pediatric chemotherapy regimens.

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**Title:** *Correlates of support for alcohol policy among cancer survivors in three registries***Naomi K. Greene, PhD, MPH** (Health Behaviors Research Branch, Behavioral Research Program Team)
**Co-authors:** Andrew B. Seidenberg, PhD (Truth Initiative Schroeder Institute) and Richard P. Moser, PhD (National Cancer Institute) and William M.P. Klein, PhD (National Cancer Institute)

**Mentor:** Susan Czajkowski, PhD (Chief, Health Behaviors Research Branch,Behavioral Research Program)

**Background:** Alcohol use is a leading modifiable risk factor for cancer incidence and recurrence. Alcohol control policies are efficacious strategies to reduce population-level alcohol use and related harms, including cancer outcomes. Policy support is critical to policy development, yet it is unclear whether cancer survivors are supportive of alcohol control policies. The research objective was to estimate policy support for three communication-based alcohol control policies. **Methods:** Data for this analysis came from the HINTS-SEER 2021 pilot study. Representative samples of cancer survivors were drawn from three NCI SEER registries – Greater Bay Area, Iowa, and New Mexico. Adapted surveys from HINTS 5 Cycle 4 (2020) were administered between January and August 2021. Weighted estimates were used to measure support, neutrality, and opposition for three alcohol control policies: 1) banning outdoor advertisements, 2) requiring specific health warnings on alcohol containers, 3) requiring alcohol containers to show recommended drinking guidelines. Predicted probabilities for policy support were estimated from marginal effects using weighted multinomial logistic regression models. **Results:** Cancer survivors were most supportive of requiring specific health warnings on alcohol containers (71% [95% CI: 67.2 – 73.1]) and requiring drinking guidelines on alcohol containers (67.6% [95% CI: 64.4 – 70.6]). Survivors were least supportive of banning outdoor advertising (45.0% [95% CI: 41.9 – 48.2]). After accounting for socio-demographic characteristics, alcohol use, prior diagnosis of alcohol-related cancer, and awareness of the alcohol-cancer link, political viewpoint was the only significant predictor of support for health warnings and drinking guidelines on alcohol containers. Age, gender, education, political viewpoint, alcohol use, and awareness of the alcohol-cancer link were significant predictors of support for banning outdoor advertising. **Conclusions:** Cancer survivors are most supportive of policies to regulate warnings labels on alcohol containers. They may be effective advocates for warnings labels and should be included in future research to develop warning labels.

**Biosketch:** Naomi Greene, PhD, MPH, is a Cancer Prevention Fellow (CPF) in the Health Behaviors Research Branch, where she leads and collaborates on projects examining alcohol as a target for cancer prevention across multiple domains including descriptive epidemiology, health risk messaging, behavioral health, and public policy. Dr. Greene worked as an epidemiologist at the New Mexico Department of Health before returning to school for her doctorate in public health focused on social and behavioral sciences at the Johns Hopkins Bloomberg School of Public Health. Her doctoral research examined how alcohol policies and nondiscrimination laws contribute to binge drinking disparities among sexual minority adults in the United States. Overall, she is interested in how public policies shape behavior and contribute to health and health disparities. Dr. Greene’s broad research interest is in how individual, interpersonal, and structural social factors intersect and influence behavior among individuals and populations. She centers the health of racial and ethnic minorities, sexual and gender minorities, and those living at the intersection of these populations.

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**Title:** *Participant Engagement and Cancer Genome Sequencing (PE-CGS) Evaluation Plan*
**Kaitlin Kirkpatrick Heimke, MPH** (Genomic Epidemiology Branch, Epidemiology and Genomics Research Program)
**Co-Authors**: Leah Mechanic and Rachel Hanisch and Elizabeth Gillanders and Kelly Filipski
**Mentor:** Leah Mechanic, PhD, MPH (Program Director, Genomic Epidemiology Branch, Epidemiology and Genomics Research Program)

**Background:** The genomic characterization of tumors is an important tool in exploring the heterogeneity of cancer, yet research gaps remain including underrepresented racial or ethnic minorities, rare tumor cancers, and specific cancer subsets. The National Cancer Institute (NCI) launched the Participant Engagement in Cancer Genome Sequencing (PE-CGS) Network, whose purpose is: 1) To promote and support direct engagement of cancer patients and survivors as participants in cancer research; and 2) To use such approaches for cancer genome sequencing programs addressing knowledge gaps in the genomic characterizations of tumors. A thorough on-going evaluation is needed to properly gauge progress towards achieving initiative goals. **Methods:** An evaluation plan was developed to assess the key initiative goals and will be performed every year of funding. Questions were created based on the PE-CGS Network’s goals and objectives and cover topics within participant engagement, scientific advancement, and network collaboration. Data sources include enrollment and sequencing counts provided by sites, progress reports, publications, and collaborative activities. The evaluation is in its first cycle of data collection and implementation efforts are ongoing. **Results:** Preliminary results show enrollment of 608 participants with 15% self-identifying as Hispanic or Latino (all race categories) and 56% as non-Hispanic white. Additionally, 81% of those enrolled have been diagnosed with a rare tumor cancer. 47 tumor samples have undergone sequencing. All sites have initiated participant engagement activities and include participants in study design and governance. The network has several methods for investigators to collaborate. **Conclusion:** Data from this planned evaluation can help support timely progress toward network goals. Early results indicate the PE-CGS Network is progressing, but more work needs to be done in recruiting underrepresented minority populations and sequencing tumor samples at a higher rate. The evaluation will provide valuable insight for the program and will inform future research.

**Biosketch**: Kaitlin Kirkpatrick Heimke is a Cancer Research Training Award (CRTA) fellow in the Epidemiology and Genomics Research Program’s (EGRP) Genomic Epidemiology Branch (GEB). In this role, she provides research support for several projects, including the Participant Engagement and Cancer Genome Sequencing (PE-CGS) Network. Kaitlin received her MPH in public health genetics from the University of Pittsburgh and her BS in molecular, cellular, and developmental biology from the University of Washington. Her master’s research project explored the relationship between the epigenomics of brain derived neurotrophic factor (BDNF) and psychological symptoms in individuals with breast cancer. Some of Kaitlin’s professional interests include participant engagement methodologies and addressing disparities in genomics research.

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**Title**: *Disparities in cancer clinical trials information-seeking: Findings from the National Cancer Institute’s Cancer Information Service*
**George Kueppers, PhD** (Health Communication and Informatics Research Branch, Behavioral Research Program)
**Co-Authors:** Grace Huang and Ashley Wilson and Kristin Shrader and Robin Vanderpool
**Mentors:** Robin Vanderpool, DrPH(Branch Chief, HCIRB,BRP; Chipper Dean, PhD, Program Director, HBRB, BRP)

**Purpose:** Although cancer clinical trials (CCT) are critical for developing new ways to prevent, diagnosis, and treat cancer, they are not always equitably accessed by disadvantaged populations. In addition, a necessary precursor to participating in clinical trials --  seeking information about CCT is not fully understood. This descriptive study aims to identify CCT information-seeking patterns and sociodemographic characteristics of  information-seekers more likely to contact a national cancer information service about CCT. **Methods:** Using data from the National Cancer Institute’s Cancer Information Service (CIS), we examined CCT inquiries from cancer survivors, caregivers, health professionals, and the general public over a 4-year period. Descriptive and logistic regression analyses were conducted to examine the characteristics of these inquiries and odds of involving a CCT discussion. **Results:** Between September 2018 – March 2023, 110,353 CIS inquiries originated from cancer survivors, caregivers, health professionals, and the general public; over one-quarter (27.3%) included a CCT discussion (n=30,141). Of the CCT inquiries, 35.4% originated from survivors, 53.5%  from caregivers, 6.1% from the public, and 5.0% from health professionals. Logistic regression results indicated that inquiries in Spanish had lower odds of a CCT discussion (OR=.26, [.25-.28]). Inquiries emanating from the CIS instant chat (OR=2.25, [2.17-2.33]) and email (OR=1.23, [1.16-1.29]) platforms were associated with higher odds of discussing CCT than inquiries made by telephone. Logistic regression findings for inquires with available user sociodemographic information revealed that individuals who were older, had lower income and education, no insurance coverage, and resided in rural locales had lower odds of a CCT discussion. **Conclusions:** Findings suggest there are potential disparities in CCT information-seeking among vulnerable populations, which may contribute to downstream CCT participation rates. These results affirm the continuing need to promote and disseminate quality and language-concordant CCT information, thereby enabling equitable awareness of – and ultimately participation in – CCT among all populations.

**Biosketch:** George Kueppers, Ph.D., is a Cancer Research Training Award fellow in the Health Communication and Informatics Research Branch (HCIRB) and the Health Behaviors Research Branch (HBRB) of the Behavioral Research Program where he is currently working on research projects involving analyses of NCI’s Cancer Information Service (CIS) data, HINTS and HINTS-SEER data, and primary data collection for an experimental study of cancer risk perception and HPV vaccination behavior. Dr. Kueppers' research focuses on the relationships between communication, learning, and behavior, particularly in the contexts of individual and collective health as well as health-related public policy. Additional areas of interest within DCCPS include cancer-related behavioral interventions, communicating cancer risk factors, healthcare disparities for sexual and gender minority communities and individuals with physical disabilities, health communication technology, and increasing public awareness and knowledge about cancer prevention and control. Dr. Kueppers hails from Minnesota where he earned bachelor's degrees in Political Science and Global Studies at Concordia College. He went on to receive a master's degree in Strategic Communication at George Mason University, where he also recently completed his Ph.D. in Health Communication. Dr. Kueppers' doctoral dissertation focused on undergraduate students' interpersonal mental health communication, health-related stigma, social support, self-disclosure, and help-seeking behaviors.

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**Title:** *Examining Experiences of Existential Uncertainty among Individuals Affected by Telomere Biology Disorders* **Alina Majid, MPH** (Office of the Associate Director, Healthcare Delivery Research Program) **Mentor:** Janet de Moor, MPH, PhD (Acting Associate Director, Healthcare Delivery Research Program) **Objective:** To describe the existential uncertainty experiences of individuals affected by telomere biology disorders (TBD). **Introduction**: Existential uncertainty refers to one’s awareness of the simultaneously uncertain and bounded nature of life. This awareness relates to identity, meaning, and decisions and is an inherent part of being a person. Individuals can perceive or recognize existential uncertainty at multiple degrees of awareness. **Methods and Materials:** In-depth semi-structured individual interviews were conducted with 32 TBD patients and (bereaved) caregivers. Qualitative analyses of interview transcripts are being conducted to explore experiences of existential uncertainty, as defined by a previously published concept analysis. **Results and Discussion:** Individuals impacted by TBD experienced existential uncertainty related to their illness. Overall, participants accepted existential uncertainty as intrinsic to living with TBD. They also implemented coping and management strategies that aimed to maximize life satisfaction, happiness, and a sense of meaning and purpose in life in the face of existential uncertainty. **Conclusion:** Results suggest that existential uncertainty is an aspect of the TBD experience. This uncertainty can facilitate individuals’ personal development and growth by prompting them to adopt positive outlooks on life. Findings from this analysis can act as a foundation for future studies investigating existential uncertainty in other genetic and/or rare conditions. A greater understanding of existential uncertainty may enable healthcare providers to better meet the psychological needs of patients and caregivers.

**Biosketch:** Alina Majid, MPH, is a Cancer Research Training Awardee in the Office of the Associate Director of the Healthcare Delivery Research Program (HDRP). Ms. Majid was also an NCI Communications Fellow in HDRP. During her time at HDRP, she has worked with Dr. Janet de Moor on projects related to cancer health economics and program operations. She has also worked with Dr. Paul Han and colleagues in the Division of Cancer Epidemiology and Genetics (DCEG) on projects examining the medical uncertainty experiences of individuals affected to telomere biology disorders, which are an inherited bone marrow failure syndrome. This uncertainty work represents a sub study of the Telomere Biology Disorder Needs Assessment, which is housed in the Clinical Genetics Branch of DCEG. Ms. Majid received her MPH, with a concentration in Behavioral and Community Health, from the University of Maryland, College Park (UMD). During her MPH program, she worked on science communications projects focused on translating scientific and health information into understandable materials for lay audiences. She collaborated with research teams and subject matter experts, as well as the UMD Herschel S. Horowitz Center for Health Literacy. Ms. Majid has a Bachelor of Science in Chemistry from UMD.

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**Title:** *Trust in health information sources and climate change harm perceptions: Results from the National Cancer Institute’s Health Information National Trends Survey (HINTS), 2022*

**Abigail Muro, BS** (Health Communication and Informatics Research Branch, BRP)
**Co-author:** Heather D’Angelo, PhD, MHS

**Mentor:** Heather D’Angelo, PhD, MHS (Program Director, Health Communication and Informatics Research Branch, BRP)

**Abstract:** Climate change is harmful to health, yet climate change harm perceptions are not universal. Because harm perceptions may be influenced by trust in health information sources, we assessed associations between trust and climate change harm perceptions among a nationally representative sample of U.S. adults. Data from HINTS 6 (2022) were examined. Participants (n=4979) were asked “How much do you think climate change will harm your health?” (coded *any*, *not at all*, *don’t know*). Trust in health information from *a doctor, scientists, government health agencies*, *religious organizations* and *family/friends* were measured (1 to 5). Weighted logistic regression models examined associations between trust and climate change harm perception (any vs. not at all/don’t know), adjusted for sex, age, race, ethnicity, income and education. The majority of adults believed climate change will harm health (64.1%), 19.2% believed it won’t, and 16.2% didn’t know. Greater trust in health information from a doctor (AOR 1.4, 95% CI 1.1, 1.6), scientists (AOR 1.7, 95% CI 1.5, 1.9), and government (AOR 1.7, 95% CI 1.5, 1.9) was associated with greater odds of believing climate change harms health; however, greater trust in information from religious organizations reduced odds (AOR 0.8, 95% CI 0.7, 0.9). Trust in information from family/friends was not associated with climate change harm perceptions. Trust in health information sources was associated with climate change harm perceptions but associations varied by source. Health communication delivered via alternative and diverse channels could expand the reach of climate and health messaging and ultimately increase public awareness and support for measures to mitigate the health impacts of climate change.

**Biosketch:** Abigail Muro, B.S., is a Cancer Research Training Award Fellow in the Health Communication and Informatics Research Branch (HCIRB) of the Behavioral Research Program. Ms. Muro's research interests include environmental health, cancer epidemiology, and health equity. She earned a Bachelor of Science degree in Community Health with high honors from the University of Maryland at College Park in December 2022. During her final semester, she interned with HCIRB where she enjoyed working on projects related to climate change and cancer.

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**Title:** *Oral Hygiene and Oral Cancer: A Review of Epidemiology Studies*

**Lauryn Perpall, MPH** (Environmental Epidemiology Branch, EGRP)

**Mentor:** Tram Kim Lam, PhD, MPH (Branch Chief, Environmental Epidemiology Branch, EGRP)

**Background:** Oral hygiene practices may contribute to risk of oral cancer. Oral hygiene practices include regularly brushing teeth, flossing, rinsing the mouth, and attending routine dental checkups. Oral cancer encompasses multiple cancers, including oral cavity, esophageal, pharynx, larynx, head & neck, aerodigestive, and tongue. Understanding the role of oral health and its contribution to cancer risk may inform oral cancer prevention guidelines. We performed a literature review to assess the evidence between oral hygiene practices and oral cancer risk. **Methods:** We searched PubMed using the following search terms: oral cancer (oral cavity, oropharyngeal, pharynx, larynx, nasopharyngeal, leukoplakia, Head & Neck) AND oral hygiene (brushing, flossing, mouth wash, oral health risk factor, periodontitis). We identified 814 studies; further manual review yielded 37 studies that meet our inclusion criteria. **Results:** The 37 studies included 35 case-controls and 2 cohorts from five different continents with the majority from Asia (61%). The oral hygiene practices varied among studies with most of the studies investigating toothbrushing frequency (49%), tooth loss (40%), and dental check-up frequency (28%). The remainder of the studies investigated mouthwash use (19%), bad prosthesis/dentures (17%), gum bleeding/periodontitis (13%), recurrent ulceration (6%), flossing (6%), instrument used (toothbrush, finger, stick) (4%), and other hygiene habits (19%). Across all studies, the cancer most studied was oral cavity cancer (51%) followed by pharynx (28%), esophageal (23%), head & neck (13%), larynx (11%), aerodigestive tract (9%), and tongue (4%) cancer. **Conclusion:** The current epidemiological evidence, based primarily from case-control studies, is equivocal although there is a suggestive positive association between oral hygiene and oral cancer risk. Less toothbrushing frequency, tooth loss, and dental visit frequency were indicators of oral hygiene practices and factors. Future studies, using prospective cohort study design and more objective measures of oral health practices and factors are needed to further elucidate the role of oral hygiene practices and oral cancer risk.

**Biosketch:** Lauryn Perpall, MPH, is a Cancer Research Training Award (CRTA) fellow in the EGRP Environmental Epidemiology Branch, where she is involved with *Oral Hygiene and Oral Cancer: A Review of Epidemiologic Studies,* administrative tasks for the Metabolic Dysregulation Obesity and Cancer Risk (MeDOC) Program, the International Interest Group, and more recently the Implementation Science Interest Group and Environmental Justice Interest Group. Before joining EGRP, Lauryn was a student Climate & Health Equity Research intern at the Center for Community Engagement, Environmental Justice, and Health (CEEJH) at the University of Maryland, College Park. At CEEJH, Lauryn completed CITI research training, developed a response to an EPA Social Vulnerability Report, conducted a literature review of climate/health focused action plans, and helped with the development of a climate change, environmental justice and COVID manuscript.

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**Title**: *Exploring the Impact of Stress, Discrimination, and Racial Concordance on Depressive Symptoms in Interracial and Intra-Racial Couples During the COVID-19 Pandemic***Romy RW, PhD (**Basic Biobehavioral and Psychological Sciences & Health Communication and Informatics Research, SBehavioral Research Program)
**Mentors:** Amanda Acevedo, PhD (Program Director, Basic Biobehavioral and Psychological Sciences, BRP) and Rebecca Ferrer, Ph.D. (Basic Biobehavioral and Psychological Sciences Branch, BRP) and Nicole Senft Everson, PhD (Program Director, Health Communication and Informatics Research, BRP)
**Co-authors:** Catherine Pichardo and Jennifer Bowers and Laura Dwyer and Rebecca Ferrer and Amanda Acevedo

**Overview**: This study will use data from the Relationships, Risk Perceptions, and Cancer-related Behaviors during the COVID-19 Pandemic (R2C2) project to understand whether individuals’ own perceived stress and/or discrimination is associated with their or their partner’s depressive symptoms among romantic, cohabitating dyads. Additionally, the study will examine whether racial concordance among dyads moderates these associations. **Background**: Existing literature highlights both perceived stress and experiences of discrimination influence anxiety and depression in interracial and intra-racial relationships, but studies often overlook the influence of partners’ stress and experiences of discrimination. This study uses actor-partner interdependence modeling to examine associations among stress, discrimination, and depressive symptoms in racially concordant and discordant couples. **Method**: Participants were recruited through Prolific from October 2021-June 2022. Recruitment was stratified to oversample individuals from underrepresented racial/ethnic identities. Participants were eligible if they were in a romantic cohabitating relationship, participated on Prolific with their partner, were fluent in English, and lived in the US or UK. Eligible participants completed two self-reported surveys, with approximately one month between the surveys. Survey items included perceived stress, experiences of discrimination, depressive symptoms, and race/ethnicity. Multilevel modeling will examine depressive symptom as an outcome and survey completion timing, country, age, gender, and education as covariates. **Results:** We obtained complete data for 194 dyads. Pre-registration for the analysis plan is available at <https://doi.org/10.17605/OSF.IO/ACY9H>. The analysis is undergoing. **Conclusion**: This study will provide insights into how stress and discrimination are associated with depressive symptoms among interracial and intra-racial couples during the COVID-19 pandemic.

**Biosketch:** Dr. Romy RW is a Cancer Research Training Award postdoctoral fellow in the Basic Biobehavioral and Psychological Sciences Branch and the Health Communication and Informatics Research Branch of the Behavioral Research Program, Division of Cancer Control & Population Sciences. She is supervised by Amanda M. Acevedo, Rebecca Ferrer, and Nicole Senft Everson. Prior to her postdoctoral position, Dr. RW earned her Ph.D. in Communication from the University of Maryland at College Park. During graduate school, she was an Oak Ridge Institute for Science and Education research fellow with the Food and Drug Administration, Center for Drug Evaluation and Research. Her research focuses on the interrelationships among health communication, social identity, and mediated technologies. She examines the roles and effects of racial identity and health communication on marginalized patients’ physical and psychological health outcomes. Specifically, she addresses the power dynamics, stereotyping, and prejudice prevalent in intergroup relationships that contribute to poorer health outcomes for marginalized or underserved populations. In her dissertation, she conducted a health intervention to assess the impact of intercultural interactions and computer-mediated communication on mental health outcomes.

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**Title**: *The Integration of Cancer Survivor and Advocate Perspectives into NCI Office of Cancer Survivorship Activities***Tiffany Trinh, MPH** (Office of Cancer Survivorship)
**Mentor:** Nicole Saiontz, MHS (Communications Lead, Office of Cancer Survivorship)

**Abstract**: There are more than 18 million cancer survivors in the United States today. While advances in cancer research have led to improved treatment and supportive care, many survivors still face lifelong challenges. NCI’s Office of Cancer Survivorship (OCS) was created in direct response to calls from advocates, to support survivors through promoting a better understanding of their unique needs and to work to address them. A key component of OCS’s mission is to spotlight the perspectives of survivors and caregivers through broad dissemination of their stories. The presentation aims to describe keys ways in which OCS shares these stories, including: 1) written survivor stories and short videos shared on the OCS Cancer Survivor Stories webpage, 2) a webinar series featuring cancer survivors and researchers who are working to advance key scientific areas related to cancer survivorship, and 3) promotion of those survivor stories and webinars via social media and other outreach. Currently, 18 survivor stories are featured on the OCS Cancer Survivor Stories webpage. These stories highlight survivor perspectives, experiences, challenges, coping strategies, shared vulnerability, and encouraging cancer journeys. Additionally, 18 webinars have been conducted as part of the OCS Director’s Series, five of which included cancer survivors. The webinars have provided a unique platform for survivors to share their experiences on specific topics and to participate in a Q&A with attendees. Integrating cancer survivor stories into OCS’s work has made positive impacts. Through these projects, survivor story pageviews have increased by 15 times since the stories were first shared in 2015, and survivor advocates have been able to share new perspectives on important cancer research topics. To advance survivorship research, OCS will incorporate more survivor and caregiver perspective into future work. This includes survivors from culturally diverse backgrounds and specific survivor populations, such as pediatric and adolescent and young adult (AYA), and those living with or caring for someone diagnosed with advanced and metastatic cancer.

**Biosketch:** Tiffany Trinh, MPH, is a Cancer Research Training Award (CRTA) fellow in OCS, where she primarily supports OCS communication efforts, including the Cancer Survivor Stories section on the OCS website, other website materials, and the OCS Twitter and LinkedIn accounts. Before joining OCS, she was a program lead at the University of Minnesota YMCA, where she implemented and led a professional development program for underrepresented students of color, and a COVID-19 contact tracer and case investigator for the Cook County Department of Public Health in Chicago. She received her master’s degree in Community Health Promotion at the University of Minnesota, where she was a research assistant for a pilot study on cervical cancer screening in HIV+ women in Guangxi, China, at the Guangxi CDC.

DCCPS Fellows Symposium 2023
Abstract and Biosketch for Summer Intern Poster Session

**Title:** *Health-Related Quality of Life Among Older Adults with Type II Diabetes Following a Cancer Diagnosis: A SEER-MHOS Analysis*
**Rabia Asjid, BS** (Outcomes Research Branch, Healthcare Delivery Research Program)
**Mentor:** Roxanne Jensen, PhD (Program Director, Outcomes Research Branch, Healthcare Delivery Research Program)

**Background:** Health-related quality of life (HRQOL) outcomes remain poorly characterized among older adults (age ≥ 65) with type 2 diabetes mellitus (T2DM) following a cancer diagnosis. As the population ages and advancements in disease detection and treatment continue to improve, there has been a notable rise in cancer survivors living with T2DM. Thus, there is a need to highlight and characterize HRQOL outcomes within this population. **Objective:** Our study aim is to characterize HRQOL outcomes in older adults with T2DM within five years of a first cancer diagnosis. **Methods:** We conducted a secondary data analysis using the Surveillance, Epidemiology, and End Results - Medicare Health Outcomes Survey (SEER-MHOS) data resource. Our sample includes Medicare beneficiaries 65 and older who received an initial cancer diagnosis, and at least one Medicare Part D claim for at least one oral diabetes medication prior to cancer diagnosis. Our HRQOL outcomes are the Veterans Rand 12 (VR-12) physical (PCS) and mental (MCS) component scores, PROMIS pain interference and the PHQ-2. We analyzed associations between patient demographics and SEER clinical variables (i.e., cancer type, stage at diagnosis, time since diagnosis) on HRQOL outcomes. **Results:** Results will be updated on poster. **Conclusion:** We hypothesize that among the older diabetic population, a cancer diagnosis will lead to significantly poorer health-related quality of life outcomes.

**Biosketch**: Rabia Asjid, BS, is a Summer Fellow in the Outcomes Research Branch within the Healthcare Delivery Research Program, where she is primarily working on a project to analyze Medicare Part D claims data using SEER-MHOS to assess how changes in adherence to oral anti-diabetes medications impacts the quality of life among older adults with type II diabetes mellitus following a cancer diagnosis. Before joining HDRP, Rabia was a 2022 Summer Fellow in the Office of the Director at DCCPS where she performed portfolio analyses to identify research gaps for the medically underserved population and associated health disparities. Rabia has recently earned a Bachelor of Science in Public Health Science from the University of Maryland. While there, she worked on a research proposal to probe the role of the gene PA14\_06450 in the ability of *Pseudomonas aeruginosa* to form biofilms for chronic biofilm-mediated catheter-associated urinary tract infections in humans.

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**Title:** *Assessing the Use of NCI’s Automated Self-Administered 24-Hour Dietary Assessment Tool*

**Zachary Cutler** (Epidemiology and Genomics Research Program, EGRP)
**Co-author:** Danielle Daee, PhD.

**Mentors:** Christie Kaefer, MBA (Lead Writer/Editor, Epidemiology and Genomics Research Program, EGRP) and Scott Rogers, MPH(Public Health Advisor, Epidemiology and Genomics Research Program, EGRP)

**Overview:** To better understand the uptake of the Automated Self-Administered 24-Hour Dietary assessment Tool (ASA24), it is important to periodically assess its use in extramural research. **Background:** ASA24 is a free, online tool that enables collection of auto-coded, self-administered 24-hour dietary recalls and/or multi-day food records. ASA24 was developed by the National Cancer Institute (NCI) and is maintained with funding from multiple National Institutes of Health (NIH) Institutes and Centers. **Methods:** Research publications using ASA24 from 2012-July 2023 were identified by keyword search (“ASA24”, “Self-Administered 24-hour”, etc.) of literature databases (i.e. PubMed, CINAHL complete, Psycinfo, and Google Scholar). NCI staff reviewed all the publications for relevance. The publications with PubMed IDs (708/759) were imputed into iSearch, a tool provided by NIH that allows for curation of PubMed articles, and a portfolio was created for analysis. iSearch extracted keywords, synonyms, and phrases, along with MeSH terms, and provided a list of conditions associated with each publication. The portfolio of publications was exported and analyzed in Excel. **Results:** Our analysis identified the top Department of Health and Human Services Funding Agency (NIH), the most frequent funding institutes (The National Institute of Diabetes and Digestive and Kidney Disease, National Cancer Institute, and National Institute of General Medical Sciences), and the top conditions of research focus, (obesity, overweight, weight loss, cancer, and cardiovascular) in publications using ASA24. **Conclusion:** Of the articles assigned conditions by iSearch algorithms, the majority (~41.2%) described research related to the condition “Obesity.” Which is consistent with the considerable efforts across NIH to accelerate research to address the obesity epidemic in the United States. Obesity is a risk factor for many diseases such as diabetes, high blood pressure, cardiovascular disease, stroke, and at many cancer types. The relevance of ASA24 across NIH is highlighted by the range of grant acknowledgements from 27 Institutes and Centers, along with 250 health conditions studied by researchers.

**Biosketch:** Zachary Cutler recently joined the Office of the Associate Director (OAD) of the Epidemiology and Genomics Research Program (EGRP) as a summer intern. In this role, he will be working on an analysis of the ways in which the Automated Self-Administered 24-hour (ASA24) Dietary Assessment Tool is used by the scientific community and working on identifying NIH grants that are using data and specimens from the NCI-supported Cancer Epidemiology Cohorts. His mentors are Christie Kaefer and Scott Rogers. For almost a decade, Zachary has worked as a supervisor for Ultimate Amusements, a company specializing in providing entertainment for parties. During his time there, he has developed problem-solving, management, and people skills. Zachary was born in Washington, D.C., and raised in Potomac, MD. He is currently a rising junior at American University studying Biochemistry.

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**Title:** *Smoking Cessation Behaviors and Smoking Rules Among US Adults Who Smoke*

*Menthol and Non-Menthol Cigarettes*

**Giulia Ishi** (Behavioral Research Program’s (BRP) Tobacco Control Research Branch (TCRB))

**Mentor:** Dr. Carolyn Reyes-Guzman Ph.D, M.P.H. (Program Director of the BRP’s TCRB)

**Overview:** Using the Tobacco Use Supplement to the Current Population Survey (TUS-CPS) September 2022 questionnaire self-response data, this study examined menthol vs. non-menthol cigarette smoking patterns and how they pertain to cessation behaviors. **Background:** State specific smoking cessation behaviors and menthol cigarette smoking trends have both been analyzed separately using 2014-2015 and 2003-2019 data, respectively. These analyses found that in all states, at least two-thirds of cigarette smokers expressed some interest in quitting especially in the Northern part of the US. Moreover, while smoking and menthol smoking has decreased, menthol smoking among current smokers increased from 2003 to 2018-2019. This is especially prevalent among young adults, women, and non-Hispanic Black current smokers. However, trends connecting menthol vs. non-menthol cigarette use to cessation success have not been thoroughly explored. **Purpose:** The prevalence of smoking behaviors and preference between menthol and non-menthol cigarettes will be assessed based an individual’s race and ethnicity, quit attempts, length of quit attempts, quit methods, and smoke exposure from their surrounding of family/friends. **Implications:** The findings may suggest a relationship between menthol use and cessation success as well as the impact of smoking behaviors from other factors on cessation success.

**Biosketch:** Giulia Ishi is a summer intern in the Behavioral Research Program’s (BRP) Tobacco Control Research Branch (TCRB). Working under Dr. Carolyn Reyes-Guzman, Ph.D, M.P.H., she studied factors related to tobacco cessation, particularly analyzing trends associated with menthol vs. non-menthol cigarette use. During the year, she is a full-time undergraduate student at Baylor University in Waco, Texas majoring in Health Science Studies, minoring in Biology and pursuing a certificate in Bioethics on the Pre-Medical track. Her research interests lie in analyzing trends across large populations. One of the projects she completed this past year was a county-level study of self-perception of climate change risk and corresponding prevalence of cardiorespiratory illnesses using data from the U.S. Census. Giulia plans to pursue large population studies and apply it to her career in the future.

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**Title**: Tobacco Use Supplement to the Current Population Survey Data Brief
**Meghna Krishnan** (Tobacco Control Research Branch/ Behavioral Research Program) **Mentor:** Maggie Mayer, PhD, MPH (Tobacco Control Research Branch, BRP)

**Background:** The Tobacco Use Supplement to the Current Population Survey (TUS-CPS) is the largest nationally representative cross-sectional survey of tobacco use among U.S. adults. The goal of this project is to create a brief summarizing the September 2022 data from the forthcoming 2022-23 wave of TUS-CPS. This brief will focus on some populations vulnerable to tobacco use and tobacco-related disparities: young adults (18-24), and racial and ethnic minorities. **Methods:** We estimated the prevalence of tobacco product use (cigarettes, cigars, pipes, hookah, e-cigarettes, smokeless tobacco, and heated tobacco), daily and non-daily cigarette smoking, and use of menthol cigarettes. Additionally, we estimated the prevalence of past-year cigarette quit attempts and use of cessation aids during a quit attempt. Among e-cigarette users, we examined type of device usually used, and flavors used in the past 30 days. Because survey and replicate weights are still being developed, results are unweighted and do not include variance estimates. **Results:** We estimated that 15.0% of respondents used any tobacco product. The most used product was cigarettes (10.1%). Among 18–24-year-olds, 9.7% used e-cigarettes, and 4.9% used cigarettes. Almost one-third (30.2%) of all current smokers usually used menthol cigarettes, while more than three-quarters (75.3%) of non-Hispanic Black smokers reported using menthol cigarettes. Although 41.2% of respondents who smoked one year prior to the survey had made a quit attempt in the past year, 60.4% of those who tried to quit did not use any cessation medication or counseling. Among e-cigarette users, the most common device type was disposables (41.8%), and the most prevalent flavors were fruit (48.3%) and menthol (22.2%). **Conclusion:** The TUS-CPS provides extensive information on tobacco use. These findings help to visualize tobacco use patterns across different groups (age, race/ethnicity, gender, and education) while underscoring the need for further work to eliminate disparities in tobacco use.

**Biosketch:** Meghna Krishnan is a Summer Intern in the Tobacco Control Research Branch of the Behavioral Research Program. This summer she is creating a data brief to summarize findings from the September 2022 Tobacco Use Supplement to the Current Population Survey. Her mentor is Dr. Margaret Mayer. Meghna is currently a rising sophomore at the University of Maryland, College Park, where she is studying Public Health Science with a minor in Data Science. Prior research, which involved literature review, qualitative analysis, and data visualization, has focused on use of Ayurvedic medicine in medical practices and health inequalities in the United States. She is also interested in pursuing a career as a Physician Assistant as she has a passion for patient care and problem solving.

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**Title**: *Engagement of Advanced Practice Providers: Evaluating a Method of Providing Clinical Trial
Related Education*
**Hannah Mordin** (Office of the Associate Director, Healthcare Delivery Research Program)
**Mentors**: Kate Castro MS, RN, AOCN® (Nurse Consultant/NCORP CCDR Operations Lead, Healthcare Delivery Research Program) and Marge Good, MS, RN (Nurse Consultant/Program Scientist, DCP COPTG)

**Abstract:** Oncology Advanced Practice Providers (APP’s), specifically Nurse Practitioners and Physician Assistants, contribute greatly to research conducted in the NCI Community Oncology Research Program (NCORP). A 2020 survey found that the most common barriers for APPs participating in NCI-sponsored research are: clinical trial related education, NCI polices requiring cosignatories for study agents, and NCI policies limiting APP’s roles in NCI trials. Although NCI policies requiring a physician cosignatory and limiting roles of APP’s have changed, availability and promotion of clinical trial related education remains an issue. APPs want to be involved in the clinical trials however, there are frequent issues with the timing, access, and resources available for relevant educational trainings. In some community settings, there seems to be either a miscommunication or misunderstanding between patients and physicians regarding the role of an Advanced Practice Provider and what they are allowed to do in NCI-sponsored research. A 2022 APP Clinical Trials training has had minimal uptake by the NCORP APP community for unknown reasons. This assessment aims to explore the involvement of APP’s in NCORP research and identify optimal strategies for promoting APP education. The primary objective is to identify barriers and facilitators to NCORP APPs engagement in education related to NCI-Sponsored trials. Data will be collected by the Summer Fellow through one-on-one semi structured interviews with seven NCORP APPs rostered as NCI Investigators. The data will be analyzed through thematic coding with two coders. Any discrepancies in coding will be resolved through discussion with a third team member. This assessment will inform strategies for promoting APP education/training within NCORP. The results will be utilized by the APP Research Base working group and NCI staff to inform future APP trainings.

**Biosketch**: Hannah is a rising senior at Western Carolina University majoring in Psychology with a minor in Communications. She plans to explore counseling, psychology, and social work as potential careers. Hannah has worked with children and adolescents at camps and advocacy organizations in Virginia and North Carolina and hopes to continue working with pediatric and young adult populations in her career. Hannah is working with Kate Castro, MS, RN, to analyze the utilization of advanced practice providers in the NCI Community Oncology Research Program. This data will inform the work of the NCORP Advanced Practice Provider Task Force.

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 **Title:** *Psychological Distress of Smokers Screened for Lung Cancer Before Versus During the COVID-19 Pandemic* **Mariana Orihuela (**Tobacco Control Research Branch, Behavioral Research Program)
**Mentor:** Stephanie Land, PhD (Program Director, Tobacco Control Research Branch, BRP)

**Abstract:** As part of a larger study whose purpose is to analyze the characteristics of people who smoke who enrolled in clinical trials focused on lung cancer screening and smoking cessation before the start versus during the COVID-19 pandemic, this project examines the psychological distress of these participants. Finding differences in psychological distress of those enrolled in Smoking Cessation at Lung Examination (SCALE) trials before and during the pandemic provides information needed to deliver adequate services and continue reducing smoking behavior. The project uses data from five SCALE studies, and also incorporates data from Johns Hopkins University, and the Google Community Mobility Reports. The Kessler Psychological Distress Scale was used to assess participants’ psychological distress in each SCALE study. Johns Hopkins University contributed with weekly country-level COVID-19 case rates, while Google Community Mobility Reports provided country level percent change in time spent in residence compared to pre-pandemic baseline. To study these variables, a multi-level segmented regression analysis predicting participants’ psychological distress from week and weekly level COVID-19 case rates will be conducted. Line graphs will be created to demonstrate participants’ psychological distress over time. It is predicted that participants enrolled after the start of the COVID-19 pandemic will experience more psychological distress than those enrolled before the start of the pandemic, and that the levels of psychological distress of those newly enrolled during the pandemic will be related to the weekly country level COVID case rates. *Keywords: COVID-19, psychological distress, smoking cessation, lung cancer examination.*

**Biosketch**: Mariana Orihuela is an Amgen Scholar interning in the Tobacco Control Research Branch at the National Cancer Institute, where she is working on a project comparing smoking cessation trial participants before versus during the COVID-19 pandemic. Mariana is a rising junior at the University of South Carolina, majoring in psychology and minoring in neuroscience. During her freshman year of college, she joined the Bilingual Reading Difficulty Identification Lab, whose purpose is to identify factors that make it difficult for Spanish-English-speaking children to learn how to read in U.S. schools. Part of her role as a research assistant was to collect data by traveling to local low-income elementary schools and administering speech and language assessments to children in kindergarten and first grade. She also served as the lead coordinator of parent outreach in the lab, collecting additional data by contacting parents using her Spanish and supervising and training lab members on this process. Last semester, she switched to the Brain Research Across Development lab at the Institute of Mind and Brain at the University of South Carolina, which studies the social and atypical brains of children. So far, she has been collecting and analyzing data by conducting EEGs on children.

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**Title:** *Challenges and Opportunities for Time-Sensitive Evaluation of Natural Experiments*

**Jenna Shi** (Health Behaviors Research Branch, BRP)
**Mentor:** David Berrigan,PhD, MPH (Program Director, Health Behaviors Research Branch, BRP)

**Background:** Natural experiments are an important research design used in evaluating aspects of the built, economic, and policy environment influencing obesity when randomized control trials are difficult or impossible. Yet, rigorous evaluation of natural experiments can be difficult to implement, particularly during unforeseen events such as the COVID-19 pandemic. This poster summarizes investigator-reported challenges and opportunities arising in time-sensitive evaluation grants funded by a NIH PAR. **Methods:** Questionnaires asking about study-related implementation barriers, successes, challenges, lessons learned, COVID-19 challenges, and COVID-19 successes were sent to recipients of the Time-Sensitive Obesity Policy and Program Evaluation (TSOPPE) PAR as of 2020 (*n*=22/20 responses). Free text responses were summarized for three of the five questionnaire questions, and the six sub-categories above were coded for multiple themes. **Results:** Changes in the target policy and barriers to data collection were the two most frequent of the nine implementation-related challenges. Of the six different general challenges, participant recruitment was the most prevalent, and of the five COVID-19 related challenges, data collection was the most prevalent. Development of good community rapport was reported under successes and as a major lesson for several grantees: “building good relationships with our study participants and communities is critical to the successful completion of this study.” The COVID-19 pandemic also created opportunities to gather new data and form new research questions. **Discussion:** Our findings suggest that continuing attention to participant recruitment and retention and data collection methods could contribute to strengthening evaluation of natural experiments. Community rapport and building strong relationships with study stakeholders should also be prioritized when conducting natural experiments. Finally, unexpected disruptions like the COVID-19 pandemic can create new challenges for researchers but can also lead to new research questions that should be considered.

**Biosketch**: Jenna Shi is a summer intern working in the Health Behaviors Research Branch in the Behavioral Research Program, under the mentorship of Dr. David Berrigan. Her primary efforts are related to examining natural experiment evaluations and time-sensitive policy evaluation grants related to obesity. She is also assisting with research related to sleep characteristics and obesity risk in children and adolescents using data from National Health and Nutrition Examination Survey (NHANES). Ms. Shi is a rising 3rd year undergraduate student at Rice University pursuing a B.A. in Sports Medicine and Exercise Physiology on the pre-medical track. Prior to this summer, she has conducted research at the Baylor College of Medicine and Agricultural Research Service of the U.S. Department of Agriculture’s Children’s Nutrition Research Center, exploring food behaviors in individuals with Smith-Magenis syndrome and assisting on projects investigating the relationship between vitamin D and gene transcription. Her current research interests include physical activity, diet and nutrition, and chronic diseases.
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**Title:** *Descriptive Analysis of Moving Through Cancer® Exercise Program Directory Listings***Devin Silver** (Health Behaviors Research Branch, BRP)
**Mentor:** Frank Perna, EdD, PhD (Program Director, Health Behaviors Research Branch, BRP)

**Background**: The benefits of exercise for cancer survivors are well-known, and leading professional groups such as the American College of Sports Medicine (ACSM), the American Society of Clinical Oncology (ASCO), and the American Cancer Society (ACS) have published specific exercise guidelines for cancer survivors that moderate or qualify general physical activity recommendations (2018 Physical Activity Guidelines for Americans, HHS). The ACSM’s Exercise is Medicine (ACSM-EIM) program created the *Moving Through Cancer* (MTC) platform and initiative to improve patient access to exercise program resources. ACSM supports a national directory where programs can describe themselves and provide a link to their website. However, less known is the extent and characteristics of available programs and their proximity to NCI-Designated Comprehensive Cancer Centers. **Purpose:** The purpose of our research was to systematically code key features of each MTC program listed, capture location and proximity to cancer centers, and conduct descriptive data analyses addressing questions concerning types of exercise program offered, providers, cost, and proximity. **Methods:** We evaluated the 1,594 programs listed on the MTC Exercise Program Directory (accessed 05/25/2023 – 06/13/2023) and coded key features – did the program: include a website link; describe program type (e.g., fitness course, rehabilitation service, etc.); specify cost (e.g., free, insurance-covered); specify format (e.g., virtual or in-person); list provider certifications or exercise guidelines; and/or mention specific cancer populations (e.g., adults, children). The cities and zip codes of each program were also collected and mapped for their proximity to NCI-Designated Comprehensive Cancer Centers. We will use this information to calculate descriptive statistics related to program features. **Results:** We will present the descriptive statistics derived from information gathered during the coding phase. **Conclusions:** Based on our data analysis, we will reach conclusions regarding ease of patient accessibility and program characteristics.

**Biosketch:** Devin Silver is a Cancer Research Training Award (CRTA) fellow this summer in the BRP Health Behaviors Research Branch, where he is primarily working on coding and analyzing exercise programs for cancer survivors listed in the ACSM Moving Through Cancer Exercise Program Directory. Devin is also coding similar programs and resources offered through NCI-Designated Comprehensive Cancer Centers with the Promoting Healthy Lifestyles to OPTImize Cancer Survivorship (OPTICS) Physical Activity Working Group. This fall, Devin will be a sophomore at the University of Wisconsin-Madison, where he is majoring in Biology on a pre-medical track and minoring in Athletic Healthcare. At UW-Madison, Devin is a member of Alpha Epsilon Delta, a National Health Preprofessional Honor Society, where he is involved in clinical, educational, and volunteer opportunities in pursuit of his development as both a student and a professional.

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**Title:** *Cannabis and Cancer Related Research: 2013 to 2022 trends in published literature and NIH Grants***Jordan Stearns, BS** (DCCPS, Office of the Director)
**Co-authors**: Gary Ellison, PhD, and Mark Alexander, MSC, and Frederick Kim
**Mentor:** Gary Ellison, PhD

**Background:** State policies governing the use of cannabis and cannabinoids for both medical and nonmedical use have shifted rapidly over the past decade. Currently, cannabis is legal for adult nonmedical use in 21 states (including two territories and Washington D.C.), with an additional 15 states supporting comprehensive medical cannabis programs. Varying amounts of marijuana possession have also been decriminalized in 27 states, again including Washington D.C. When considering the magnitude of changes in social, political, and regulatory parameters surrounding cannabis use, it is unsurprising that cannabis research has struggled to keep pace, particularly within the field of oncology. Studies have demonstrated the potential benefit of cannabis use in cancer patients, especially regarding the management of pain, anorexia, and nausea. Other studies suggest cannabis may have an antitumor effect, though results have been inconsistent. Studies have also attempted to determine the risk of developing cancer associated with cannabis use with mixed results. Consequently, the lack of federal guidelines surrounding cannabis pose a crucial challenge to research and clinical practice. **Purpose:** The purpose of this project is to determine the state of cannabis, cannabinoids, and cancer research and National Institutes of Health research funding between January 1, 2013 and December 31, 2022. **Methodology:** Web of Science and PubMed will be used to search publications using search terms relevant to cannabis and cancer research. Subsequent publications will be screened for inclusion criteria and analyzed using Web of Science and Clarivate citation analysis, VOSviewer, and Altmetric Explorer. The NIH grants portfolio will be analyzed using NIH’s Query View Report (QVR) software and will include relevant Research, Condition, and Disease Categorization (RCDC) search codes. This project will provide an understanding of trends in research and research funding and help identify potential cannabis, cannabinoid, and cancer research opportunities.

**Biosketch:** Jordan Stearns has joined the NCI Division of Cancer Control and Population Sciences as a Summer Intern. Jordan is working with Gary Ellison in the Office of the Director on a project analyzing trends in cannabis-centered cancer research and NIH grant funding spanning the last 10 years to help identify potential cannabis, cannabinoid, and cancer research opportunities. Before joining DCCPS, Jordan worked in several molecular pharmacology labs, which exposed him to cancer research on a molecular level and granted experience in data analysis and research design. He is excited to explore cancer on a population level and feels the experience will help prepare him for a career in hematology and oncology. Jordan has a bachelor’s degree in biology from Morehouse College and is currently a 3rd year medical student at Howard University College of Medicine. He enjoys skiing, movies, and long-distance running.

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**Title:** *The Associations Between the COVID-19 Pandemic and Participant Characteristics at Enrollment in Smoking Cessation at Lung Examination (SCALE) Collaboration Trials*

**Karissa Tran** (Tobacco Control Research Branch, Behavioral Research Program)
**Co-authors**: Mariana Orihuela and Leeann Siegel, PhD, MPH, and Stephanie Land, PhD

**Mentor:** Stephanie Land, PhD (Program Director, Tobacco Control Research Branch, Behavioral Research Program)

**Background:** The COVID-19 pandemic brought with it major lifestyle changes that had drastic effects on health. However, these effects may not have been felt equally by all individuals.

**Aims:** To examine how the baseline characteristics of participants enrolling in Smoking Cessation at Lung Examination (SCALE) Collaboration trials changed following the start of the COVID-19 pandemic and over the course of the COVID-19 pandemic. The SCALE Collaboration is an initiative that researches smoking cessation treatment delivered in the lung cancer screening setting for long-term smokers who are screened for lung cancer with low-dose computed tomography (LDCT).

**Method:** The project uses data from the SCALE Special Measures Collection (SMC), Johns Hopkins University, and Google’s Community Mobility Reports. Clinic zip codes, clinic locations, and baseline participant characteristics such as smoking behavior, readiness to change smoking behavior, mental health, alcohol use, demographics, perceived risk of lung cancer, and use of tobacco products other than cigarettes were from the SCALE SMC. Weekly county-level COVID-19 case rates were from Johns Hopkins University. County-level percentage changes in time spent in residence compared to the pre-pandemic baseline were from Google’s Community Mobility Reports.

**Results/Conclusion:** This study is ongoing. Analyses are currently in progress.

**Biosketch:** Karissa Tran is a fourth-year undergraduate student majoring in psychological science at California State University San Marcos. She is a research assistant at the Cannabis and Tobacco Research Lab of San Diego, where she examines behavioral economic demand for cannabis and tobacco among young adult dual users as well as risk factors in the link between age of first cannabis use and cannabis misuse among young adults. For the summer, Ms. Tran is working in the Behavioral Research Program’s Tobacco Control Research Branch with Dr. Stephanie Land. She is specifically working on projects that focus on examining the impact of the COVID-19 pandemic on smoking behaviors and assessing whether NCI-Designated Comprehensive Cancer Centers offer tobacco cessation treatment programs to routinely address tobacco cessation with cancer patients.

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 **Title:** *Trends of Hysterectomy-Adjusted, Bias-Corrected Incidence Rates of Endometrial Cancer, Between 2000-2020*
**Lucia Wang, BSPH** (Statistical Research and Applications Branch, SRP)
**Co-authors:** Claire Park, MPH, and Mandi Yu, PhD, and Anne-Michelle Noone, PhD
**Mentor**: Mandi Yu, PhD (Program Director, Surveillance, Epidemiology, and End Results (SEER) Program, Statistical Research and Applications Branch, SRP)

**Background**: Endometrial cancer (EC) is among the most common malignancies affecting women worldwide, and the incidence rate continues to rise. This may be attributed to risk factors such as age, obesity, and increased estrogen levels. There are also racial disparities in incidence and mortality, with Black women experiencing worse outcomes than white women for both rates. Treatment for ECs also vary depending on the progression of tumor grade and histology. Low-grade, endometrioid cancers tend to fare better in terms of prognosis and make up most cases, while non-endometrioid cancers are more aggressive and have a lower survival rate. **Methods:** To accurately estimate the incidence rate of EC, individuals who have undergone a hysterectomy should be removed from the at-risk population. Without this adjustment, incidence is underestimated, which leads to incomplete conclusions about cancer trends. Previous studies have investigated incidence, mortality, and survival rates of EC with hysterectomy adjustments. However, estimates about hysterectomy prevalence drawn from national surveys include sampling error which biases rates. For example, subgroups with smaller population sizes will have larger sampling errors, leading to overestimation. The bias should be corrected to accurately understand cancer trends. One final problem is the increase of missing data about hysterectomy status in survey data, which must be imputed to avoid additional overestimation. **Results:** Using data from the Surveillance, Epidemiology, and End Results (SEER) and the Behavioral Risk Factor Surveillance System (BRFSS), three incidence rates can be compared: unadjusted, hysterectomy/risk-adjusted, and risk-adjusted with bias-correction. Cases are drawn from women 20 years and older in the SEER 22 database (21 registries) and population estimates are calculated by a novel method that accounts for sampling error. Subgroup analyses by race, stage, and histology reveal EC incidence trends over the past twenty years and may inform targeted public health intervention.

**Biosketch:** Lucia Wang, BSPH, is a summer intern in the SRP Statistical Research and Applications Branch under the mentorship of Dr. Mandi Yu. She is currently working on a project calculating incidence rates of endometrial cancers that adjusts for the prevalence of hysterectomy. The project is also concerned with correcting the bias in the denominator that arises from sampling error. The goal of this work is to incorporate the prevalence of hysterectomy into the Survey-Based Population-Adjusted Rate Calculator (SPARC) online tool, which can calculate age-adjusted rates of cancer incidence or mortality using national survey data. Currently, Lucia is a Master of Public Health student at Columbia University in the Epidemiology department. She is doing a concentration in infectious diseases but also interested in public health surveillance, environmental epidemiology, and health education. She is a 2022 graduate of the Bachelor of Science in Public Health program at the University of North Carolina at Chapel Hill, where she received a degree in Biostatistics.