

BIOGRAPHICAL SKETCH

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NAME: Heckman, Carolyn Joy

eRA COMMONS USER NAME (credential, e.g., agency login): checkmanstone

POSITION TITLE: Associate Professor

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Brown University, RI	BA (honors)	05/1994	Psychology
The University of Iowa, IA	PhD (honors)	07/2001	Counseling Psychology
The University of Iowa Counseling Service, IA	Internship	07/2001	Counseling Psychology
Virginia Commonwealth University, VA	Postdoctoral Fellowship	09/2002	Health Psychology and Addictions

A. Personal Statement

I am a Professor with Tenure and Co-Leader of the Cancer Prevention and Control Program at Rutgers Cancer Institute of New Jersey and a licensed clinical health psychologist. I have been funded by the NCI including five R01s, an R21, R03, and a K07, and have received funding from the American Cancer Society. I received my PhD in Counseling Psychology from the University of Iowa and completed a postdoctoral fellowship in Health Psychology and Addictions from the Department of Psychiatry at Virginia Commonwealth University School of Medicine. I was faculty at Fox Chase Cancer Center in Philadelphia for over 11 years, where I earned tenure and was promoted to Associate Professor in 2012. I joined the Department of Medicine, Section of Behavioral Science, at Rutgers in 2018, became Co-Leader of Cancer Prevention and Control in 2020, and was promoted to Full Professor in 2022. I am a licensed clinical health psychologist whose research program focuses on developing, evaluating, and disseminating innovative interventions to improve cancer risk-reduction behaviors, primarily related to skin cancer. Having published foundational studies on tanning dependence (addiction) measurement, prevalence, and correlates, I am recognized as an international leader in skin cancer prevention and indoor tanning research. I conceptualized and was invited to edit the first and only book on indoor tanning in 2011. My work has been widely cited, including in the US Preventive Services Task Force recommendation for skin cancer counseling, the World Health Organization's document on Artificial Tanning Devices: Public Health Interventions to Manage Sunbeds, and the Surgeon General's Call to Action to Prevent Skin Cancer. In 2021, I was elected to be a Fellow of the Society of Behavioral Medicine. I am currently a standing member of the NIH Health Promotion in Communities study section. My three ongoing R01s include R01CA265548, A Digital Intervention to Improve Skin Self-Examination among Melanoma Survivors; MPI R01CA244370, A Multi-Level Investigation of US Indoor Tanning Policy; and MPI R01CA260831, Evaluating Cigarette Relighting Behavior: Prevalence, Correlates, Toxicant Exposure, and Implications for Cessation. I also serve as a mentor for three NIH K awards and am mentoring four CPC junior faculty. I look forward to continuing as Program Co-Leader and advancing Cancer Prevention and Control's specific aims and strategic plans.

Ongoing and recently completed projects that I would like to highlight include:

R01CA244370

Heckman (MPI)

06/01/2020-05/31/2025

A Multi-Level Investigation of US Indoor Tanning Policy Enactment, Implementation, Compliance, Impact, and Economics

R01CA264548

Heckman (MPI)

04/01/2022-03/31/2026

A digital intervention to improve skin self-examination among melanoma survivors

R01CA260831

Heckman (MPI)

02/10/2022-02/09/2026

Evaluating Cigarette Relighting Behavior: Prevalence, Correlates, Toxicant Exposure, and Implications for Cessation

R01CA204271

Heckman (PI)

12/01/2016 -11/30/2022 (NCE)

Modifying Young Adult Skin Cancer Risk and Protective Behaviors (UV4.me2): A Hybrid Type 2 Dissemination/Effectiveness Trial

R01CA264548

Manne (PI)

05/01/2014-10/30/2020 (NCE)

An Internet-Based Behavioral Intervention for Individuals Diagnosed with Melanoma

P30 CA072720

Libutti (PI)

03/01/2019-02/28/2024

Cancer Center Support Grant (CCSG) - Cancer Prevention and Control Program

ACS RSG

Kazak (PI)

01/01/2020-12/31/2024

Implementing Family Psychosocial Risk Screening for Pediatric Health Equity

Citations:

1. **Heckman CJ**, Darlow, S, Ritterband, LM, Handorf, EA, Manne, SL. Efficacy of an Intervention to Alter Skin Cancer Risk Behaviors in Young Adults. *American Journal of Preventive Medicine*. 2016 Jul;51(1):1-11. PMID: PMC4914462. **Selected by the editors to be open access and used for CME.**
2. **Heckman CJ**, Handorf, E, Darlow, S, Ritterband, L, Manne S. An Online Skin Cancer Risk-Reduction Intervention for Young Adults: Mechanisms of Effects. *Health Psychology*. 2017 Mar;36(3):215-225. PMID:5328853.
3. **Heckman, CJ**, Riley, M, Khavjou, O, Ohman-Strickland, P, Manne, SL, Yaroch, AL, Bhurosy, T, Coups, EJ, Glanz, K. Cost, Reach, Enrollment, and Representativeness of Recruitment Efforts for an Online Skin Cancer Risk Reduction Intervention Trial for Young Adults. *Translational Behavioral Medicine*. 2021 Oct 23;11(10):1875-1884. **Editor's Choice.**
4. **Heckman, CJ**, Wackowski, O, Mukherjee, R, Hatsukami, D, Stepanov, I, Delnevo, C, Steinberg, M. Cigarette relighting: A series of pilot studies investigating a common yet understudied smoking behavior. *International Journal of Environmental Research and Public Health*. 2021 Jun 16, 18(12), 6494.

B. Positions and Honors

Positions and Employment

2000-2001	Pre-doctoral Intern, Counseling Psychology, The Univ. of Iowa Counseling Service, Iowa City, IA
2001-2002	Postdoctoral Fellow, Health Psychology and Substance Abuse, Department of Psychiatry, Virginia Commonwealth University, VA
2002-2004	Adjunct Faculty, Psychology Department, Iowa State University, Ames, IA
2004-2005	Research Associate Faculty, Dept. of Psychiatry, Virginia Commonwealth University

2005-2006	Assistant Professor, Dept. of Psychiatry, Virginia Commonwealth University
2006-2012	Assistant Professor, Cancer Prevention and Control, Fox Chase Cancer Center, Philadelphia
2012-present	Associate Professor, Cancer Prevention and Control, Fox Chase Cancer Center, Philadelphia
2015-2018	Adjunct Faculty, Dermatology and School of Public Health, Temple University, Philadelphia
2018-2022	Associate Professor, Cancer Prevention, and Control Program, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ
2020-present	Co-Leader, Cancer Prevention and Control Program, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ
2022-present	Professor, Cancer Prevention, and Control Program, Rutgers Cancer Institute of New Jersey, New Brunswick, NJ

Other Experience and Professional Memberships (selected)

2001-07, 2014	Member, American Psychological Association (APA)
2007-2018	Member, Institutional Review Board, Fox Chase Cancer Center, Philadelphia, PA
2007-present	Member, American Association of Cancer Research
2008-present	Member, American Society of Preventive Oncology
2008-present	Member, Society of Behavioral Medicine
2008-present	Federal Grant Review Committee Service: Community Level Health Promotion, Community Influences on Health Behavior, Dissemination and Implementation Research in Health, Agency for Healthcare Research and Quality, Centers for Disease Control
2010-present	Member, Division 38 (Health Psychology) of APA
2012-present	Charter Member, International Society for Research on Internet Interventions
2015-present	Founding Member, Society for Implementation Research Collaboration

Honors

1994	Delabarre Award for Outstanding Research/Scholarship in Psychology, Brown University
1996-2001	Presidential Fellowship, The University of Iowa
1997-1999	Special Graduate Assistantship, The University of Iowa
2002	Gender Research Travel Award, College on Problems of Drug Dependence, Quebec, Canada
2007	ACS/AACR Travel Scholarship to attend AACR Frontiers in Cancer Prevention Research Conference, Boston, MA
2017	Earned Temple University the Indoor Tan-Free Skin Smart Campus Platinum Award from the National Council on Skin Cancer Prevention
2017-2018	Fellow, Leadership Institute for Mid-Career Members of the Society of Behavioral Medicine
2021	Fellow, Society of Behavioral Medicine

C. Contribution to Science

1. I have contributed my expertise to informing interventions to reduce skin cancer risk and severity for specific populations. **For example, I developed and demonstrated the efficacy of the only online skin cancer risk reduction intervention targeted to young adults.** I was the PI of a study developing a multimedia, tailored, and interactive internet intervention based on the Integrative Model of Behavioral Prediction called UV4.me to reduce skin cancer risk behaviors among young adults. A paper describing UV4.me and its development was published at *Internet Interventions*, and a paper describing its successful outcomes in a national randomized controlled trial with almost 1000 young adults was published at the *American Journal of Preventive Medicine*. I was also a PI of a study that found that an intervention showing ultraviolet (UV) light photos illustrating current facial skin damage to at-risk young adults increased their skin protection stage of change at three-month follow-up. This contributes to a body of literature emphasizing the importance of focusing on appearance concerns and the use of UV photos in skin cancer risk reduction interventions.
 - a. **Heckman CJ**, Darlow, S, Ritterband, LM, Handorf, EA, et al. (2016). Efficacy of an Intervention to Alter Skin Cancer Risk Behaviors in Young Adults. *American Journal of Preventive Medicine*, 51(1), 1-11. PMID: PMC4914462
 - b. **Heckman CJ**, Darlow, S, Munshi T, Caruso, C, Ritterband, L, Raivitch, S, Fleisher, Manne S. (2015). Development of an Internet Intervention to Address Behaviors Associated with Skin Cancer Risk among Young Adults. *Internet Interventions*, 2(3), 340-350. PMID: PMC4669098

- c. **Heckman CJ**, Zhu F, Kloss JD, Manne SL, Collins B, Bass SB, & Lessin SL. (2013). Process and outcomes of a skin protection intervention for young adults. *Journal of Health Psychology*, 18(4), 561 – 573. PMID: PMC3485419
 - d. Daniel LC, **Heckman CJ**, Kloss JD, Manne SL. (2009). Comparing alternative methods of measuring skin color and damage. *Cancer Causes Control*, 20(3), 313-21. PMID: PMC2702995
2. I have contributed to research and theory on other **skin cancer risk and protective factors and their correlates among adolescents and young adults**. For example, I was the PI on a series of studies that investigated correlates of UV exposure and protection behaviors using health behavior theories such as the Health Belief Model and Integrative Model (IM) of Behavioral Prediction. For example, in one study we identified IM variables that accounted for 25-34% of the variance in sun exposure, indoor tanning, and skin protection intentions among young adults. The IM had not previously been investigated in the domain of skin cancer risk reduction, and most prior skin cancer prevention studies had focused on one prevention outcome and not compared across related outcomes within a single study and participant sample. These studies have informed the development of interventions to target specific attitudes and beliefs in order to modify skin cancer risk and protective behaviors among adolescents and young adults.
- a. Darlow, S, **Heckman, CJ**, & Munshi, T, Kloss, JD, Manne SL. (2016). Tan and thin? Associations between attitudes towards thinness, motives to tan, and tanning behaviors in adolescent girls. *Psychol Health Med*, 21(5), 618-24.
 - b. **Heckman CJ**, Wilson DB, Ingersoll KS. (2009). The influence of appearance, health, and future orientations on tanning behavior. *American Journal of Health Behavior*, 33(3), 238-43. PMID: PMC4046324
 - c. **Heckman CJ**, Manne SL, Kloss JD, Bass SB, Collins BN, Lessin SR. (2011). Beliefs and intentions for skin protection and UV exposure in young adults. *American Journal of Health Behavior*, 35(6), 699-711. PMID: PMC3261496.
 - d. **Heckman CJ** & Coups EJ. (2011). Correlates of sunscreen use among high school students: A cross-sectional survey. *BMC Public Health*, 11, 679. PMID: PMC3179453
3. I have been a research leader in the area of **indoor tanning**, particularly among young adults. I conducted the largest study as of 2008 investigating the prevalence of indoor tanning among adults (from the 2005 National Health Interview Survey). I have been a leader in identifying and investigating psychosocial correlates of indoor tanning among young women. Additionally, I conceptualized and was invited to edit the first and only book on indoor tanning in 2011. Some of the preeminent experts in the field reviewed the scientific literature for each of the chapters. Chapters from this book have been downloaded almost 14,000 times. Based on my scholarship in this area, I was invited to take a lead role in authoring an evidence-based public statement recommending banning indoor tanning among minors on behalf of the Society of Behavioral Medicine Policy Leadership Group.
- a. **Heckman, CJ**, Handorf, E, Auerbach, M. (2018). Prevalence and Correlates of Skin Cancer Screening among Indoor Tanners and Non-Tanners in the 2015 NHIS. *JAMA Dermatology*. 154(5), 554-560. PMID: PMC6128499 **In the top 5% of all research outputs scored by Altmetric in the first 2 months after publication.**
 - b. **Heckman CJ**, Coups EJ, Manne SL. (2008). Prevalence and correlates of indoor tanning among US adults. *Journal of the American Academy of Dermatology*, 58(5), 769-80. PMID: PMC2601681
 - c. **Heckman CJ**, Cohen-Filipic, J, Darlow S, Kloss, JD, Manne SL, & Munshi T. (2014). Psychiatric and addictive symptoms of young adult female indoor tanners. *American Journal of Health Promotion*, 28(3):168-74. PMID: PMC3926191
 - d. Pagoto, SL, Hillhouse, J, **Heckman CJ**, Coups, EJ, et al. on behalf of the SBM Public Policy Leadership Group. (2014). Society Behavioral Medicine (SBM) position statement: ban indoor tanning for minors. *Translational Behavioral Medicine: Practice, Policy and Research*, 4(1):124-6. PMID: PMC3958596
4. I have contributed my expertise to research on **tobacco use and interventions for tobacco cessation**. For example, I was the PI on the most comprehensive review of motivational interviewing for smoking cessation that had been conducted at that time, which has been widely cited. I served as a co-investigator, providing

clinical content and expertise, on a tutorial of how to use principal stratification-based sensitivity analysis to account for abstinence in the estimation of smoking cessation intervention effects. I was also a coinvestigator on a study of National Health Interview Survey (NHIS) data that examined the extent to which cancer survivors reported being asked and advised about smoking by health-care providers and their use of smoking cessation treatments during quit attempts.

- a. **Heckman, CJ**, Wackowski, O, Mukherjee, R, Hatsukami, D, Stepanov, I, Delnevo, C, Steinberg, M. Cigarette relighting: A series of pilot studies investigating a common yet understudied smoking behavior. *International Journal of Environmental Research and Public Health*. 2021 Jun 16, 18(12), 6494.
- b. **Heckman CJ**, Egleston BL, Hofmann, MT. Efficacy of motivational interviewing for smoking cessation: A systematic review and meta-analysis. *Tobacco Control*. 2010 Oct;19(5):410-16. Epub 2010 Jul 30. PMID: PMC2947553. **Cited 411 times.**
- c. Munshi, T, **Heckman, CJ**, Darlow, S. Association between Tobacco Waterpipe Smoking and Head and Neck Health Conditions: A Systematic Review. *Journal of the American Dental Association*. 2015 Oct;146(10)760–6.
- d. Wilson DB, McClish DK, **Heckman CJ**, Obando CP, Dahman BA. Parental smoking, closeness to parents, and youth smoking. *American Journal of Health Behavior*. 2007 31(3):261-71. PMID: 17402866.

5. **Dissemination and Implementation Science (D&I)**. My research interests involve the development, testing, and dissemination of innovative interventions to improve cancer risk and risk-reduction behaviors. I received training in D&I research through a competitive fellowship in the inaugural two-year NCI-funded Mentored Training in D&I Research in Cancer (MT-DIRC) conducted by Washington University in St. Louis 2014-2016. I founded and led the D&I Science Working Group at FCCC and now at Rutgers CINJ and am currently conducting a dissemination/effectiveness trial to reduce skin cancer risk behaviors among young adults. I was a founding member of the Society for Implementation Research Collaboration and have been a reviewer for the NIH D&I Research in Health study section. A paper from my prior R01 investigated the association between implementation of an online skin cancer prevention intervention and skin protection behavioral outcomes. I am also a coauthor on a paper on integrating D&I science into medical education with several leaders in D&I.

- a. **Heckman, CJ**, Riley, M, Khavjou, O, Ohman-Strickland, P, Manne, SL, Yaroch, AL, Bhurosy, T,* Coups, EJ, Glanz, K. Cost, Reach, Enrollment, and Representativeness of Recruitment Efforts for an Online Skin Cancer Risk Reduction Intervention Trial for Young Adults. *Translational Behavioral Medicine*. 2021 Oct 23;11(10):1875-1884. **Editor's Choice.**
- b. **Heckman CJ**, Handorf, E, Darlow, S, Ritterband, L, Manne S. (2017). An Online Skin Cancer Risk-Reduction Intervention for Young Adults: Mechanisms of Effects. *Health Psychology*, 36(3), 215-225. PMID: PMC5328853
- c. Ginossar, T, Proctor, E, Brownson, R, Chambers, D, Cragun, D, **Heckman, CJ**, Quintiliani, L, Skolarus, T. Training Clinicians in Dissemination and Implementation Science: Opportunities for Medical Education. *Journal of Medical Education and Curricular Development*. 2018 Apr 4;5.
- d. Selove R, Neil-Sztramko S, Leng J, Walker PD, Salloum RG, Ginossar T, **Heckman CJ**, Scheuermann TS, Combs T, Qualls-Hampton R, Armstrong R, Ellis S. Use of implementation science in tobacco control intervention studies in the United States between 2000-2020: A scoping review protocol. *BMJ Open*. 2020 Nov 11;10(11):e038617

List of Selected Published Work in MyBibliography (n > 125):

http://www.ncbi.nlm.nih.gov/sites/myncbi/1F9qfmbL6b6k_/bibliography/40330860/public/?sort=date&direction=ascending