THE YEAR IN REVIEW

It was a busy year for research at the Center! We began working on Building Habits Together, an R34 to develop and test the feasibility of a mobile app and social network weight loss intervention, working with Dr. Bengisu Tulu at Worcester Polytechnic Institute and the development team at Programination.

Our team also began a single arm trial of a multi-component commercial digital weight loss program with WW (formerly known as Weight Watchers). Drs. Pagoto and Waring were awarded funds from the NCI to conduct a social media research ethics study which aims to identify and investigate knowledge gaps and areas lacking consensus among researchers in this field. Dr. Pagoto and Waring also received funding from the NSF to examine the impact of the move to remote courses during the pandemic on undergraduate education in STEM.

Drs. Pagoto and Xu also submitted an R01 to develop and test the feasibility of a social media campaign for parents of children who play sports along with two R01 subcontracts with Klein Buendel, Inc to address vaccine hesitancy. This year, Dr. Pagoto’s team wrapped up their work on two R01s and an R21 and Dr. Waring wrapped her R34.

The Center ramped up its training efforts in the past year, hosting monthly webinars on topics like “How to Move your Behavioral Research Online” and “How Did You Get That Job? A Digital Health Industry Career Panel.” These webinars attracted over 700 live attendees and have garnered 4500+ views on YouTube. The entire catalog of Center webinars is available for on-demand viewing.

The year's training efforts concluded with our 5th Annual Conference, *The COVID19 Pandemic: Media, Misinformation, and Science Communication*, a two-day virtual event featuring five keynote speakers, six panelists, six paper presenters, and 34 video posters. We were honored to accept sponsorship from JMIR Infodemiology for this conference. Thank you to our distinguished speakers and all who attended.

### MISSION

The mission of the UConn Center for mHealth and Social Media is to advance the science of digital health by exploring novel applications of digital technologies to health problems, using technology to increase the impact and reach of health interventions, leveraging technology to gain a deeper understanding of health issues, and developing new methodologies with digital health tools to conduct clinical research. The Center's priorities are in the areas of research methodology and training.

### CONTENTS

<table>
<thead>
<tr>
<th>People</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Funding</td>
<td>6</td>
</tr>
<tr>
<td>Publications</td>
<td>10</td>
</tr>
<tr>
<td>Trainings</td>
<td>14</td>
</tr>
<tr>
<td>Appearances</td>
<td>15</td>
</tr>
<tr>
<td>Annual Conference</td>
<td>18</td>
</tr>
</tbody>
</table>
Core Faculty

Sherry Pagoto, PhD
Director
Professor
Allied Health Sciences

Molly Waring, PhD
Director of Methodology Core
Associate Professor
Allied Health Sciences

Ran Xu, PhD
Assistant Professor
Allied Health Sciences

Affiliate Faculty

Kim Gans, PhD, MPH
Professor
Human Development and Family Studies

Loneke Blackman Carr, PhD, RD
Assistant Professor
Nutrition

Joel Salisbury, MFA
Assistant Professor
Web and Interactive Media Design

Anne Oeldorf-Hirsch, PhD
Assistant Professor
Communication

Debs Ghosh, PhD, MPhil
Associate Professor
Geography

Jolaade Kalinowski, EdD
Assistant Professor
Human Development and Family Studies

Tricia Leahey, PhD
Associate Professor
Allied Health Sciences

Shiri Dori-Hacohen, PhD
Assistant Professor
Computer Science and Engineering

Eileen Carter, PhD, RN
Assistant Professor
Nursing

We welcomed Dr. Jolaade Kalinowski, Dr. Shiri Dori-Hacohen, and Dr. Eileen Carter to our Center this year! We are eager to feature their expertise in our monthly webinar series.
Graduate Thesis Spotlight: Laurie Groshon

This year, Laurie Groshon successfully defended her Master’s thesis entitled *A Content Analysis of Indoor Tanning Twitter Chatter During COVID-19 Related Shutdowns*. Ms. Groshon conducted a directed content analysis of tweets posted during pandemic-related statewide shutdowns that discussed indoor tanning.
Graduate Thesis Spotlight: Matthew Schroeder

This year, Matt Schroeder successfully defended his Master's thesis entitled *Tweeting the Blues Away*. His thesis project involved a conventional content analysis of the viral hashtag, #HowIFightDepression. He examined 1000+ tweets with the hashtag and aimed to examine if the tweets mentioned adaptive or maladaptive coping strategies for depression.

Undergraduate Students

**Pagoto Research Mentees**  
Stephen Aledort  
Sananya Bankwalla  
Alisha Chhabra  
Justin Jones  
Lourdes Leguiza  
Tiffany Sancelemente  
Makayla Sancelemente  
Katherine Brown  
Savanna Hathiramani  
Conrad Poole  
Deevena Annavarjula  
Kristen Dean  
Monique Kern  
Cindy Pan  
Laslian Vallejo Bucheli

**Waring Research Mentees**  
Grace Heersping  
Lauren Rudin  
Alexa Horkachuck  
Quamyia Foye  
Breajah Tyson  
Emanuela Pinci

**Xu Research Mentees**  
Fangzhou Yu  
Runshu Wang  
Evelyn Johnson  
Natalie Ranelli

**Cindy Pan Awarded Summer Undergraduate Research Funds (SURF)**

This summer, Cindy Pan, one of our undergraduate students, was awarded funding to conduct a qualitative analysis of participant responses to weekly weigh-in posts from Dr. Pagoto’s previous K24-funded projects. Cindy's work will help the Center identify new ways to maximize participant engagement in an online weight loss interventions. Cindy is a rising senior majoring in Molecular Cell Biology and Philosophy. She is also part of UConn’s FastTrack MPH program.

**Feeling Festive:** This year, our annual winter holiday lunch was virtual. Sherry Pagoto kept the spirit alive by mailing prizes to everyone on the team! This was also our farewell to our former Program Director, Jess Bibeau!
Newly Funded Projects: $1,831,418

CAHNR Seed Grant (PI: Xu) $60,000 10/01/20-09/30/23
Developing a food image recognition technique to evaluate the nutrition information of restaurant foods and community food environment.

In this proposal we plan to (1) extend and develop a deep-learning-based food image recognition technique for nutrition assessment of restaurant foods, and (2) apply it to assess the community food environment in the Hartford area, (3) validate the deep-learning results with structured interviews and surveys at local restaurants.

NHLBI R34HL145439 (PI: Pagoto) $709,180 09/01/20-08/31/23
Building Habits Together: Feasibility trial of an integrated mobile and social network weight loss intervention

We propose to build upon our previous work to create a behavioral weight loss program in which integrated technologies facilitate meaningful participant engagement and the execution of evidence-based behavioral strategies for weight loss.

NIH 1R01CA192652-01 (PI: Buller, Sub-PI: Pagoto) $25,364 09/01/20-08/31/21
Competitive Revision for Likes Pins and Views: Engaging Moms on Teen Indoor Tanning Thru Social Media

We propose to conduct a new study with the original sample of mothers to test the impact of social media messaging on COVID-19 mitigation (i.e., social distancing behaviors) and vaccination to examine the impact of different sources frequently providing this information.

WW AG200853 (PI: Pagoto) $335,890 01/01/21-12/31/21
Single arm trial of a multi-component commercial digital weight loss program

The goal of the proposed research project is to evaluate the feasibility, acceptability, and preliminary outcomes of an online multicomponent commercial weight loss program and to understand the relationship between program engagement and outcomes.

Supplement NIH 1R01CA221854 (PI: Manne, Sub-PI: Pagoto) $38,371 08/01/20-07/31/21
Facebook Intervention for Young Onset Melanoma Patients and Families: Supplement title: An examination of knowledge gaps regarding ethical practices in social media research

The goals of the proposed research are to 1) identify knowledge gaps and areas lacking in consensus among researchers about various uses of social media in clinical trials research, 2) examine the nature of the variation in opinions, and 3) identify researcher characteristics associated with knowledge gaps.
Ongoing Projects

**USDA/CAHNR Capacity Grant** (PI: Waring) $19,994  
How mothers evaluate and spread information related to child nutrition on social media

We will explore how mothers evaluate the veracity of child nutrition information they encounter on social media and examine factors influencing the spread of child nutrition misinformation in online social networks.

**NIH Renewal: 5K24HL124366-02** (PI: Pagoto) $662,613  
Mentoring in mHealth and Social Networking Interventions for CVD Risk Reduction  
This mid-career development award is designed to support mentoring in digital health research for cardiovascular disease prevention.

**NIH/NHLBI R34HL136979** (PI: Waring) $731,438  
Delivering a Post-Partum Weight Loss Intervention via Facebook vs In-Person Groups: a Feasibility Pilot Trial  
This project is testing a feasibility trial for post-partum weight loss being delivered in-person vs Facebook.

**NIH 1R01DK115545** (PI: Jaser, Sub-PI: Pagoto) $373,921  
Communication and Coping: Addressing Mothers' Needs to Improve Outcomes in Adolescents with T1D  
The aims of this study are to: 1) evaluate the effects of the Communication & Coping intervention on diabetes-related outcomes; 2) evaluate the effects of the Communication & Coping intervention on psychosocial outcomes; and 3) explore the differential impact of the intervention across demographic factors.

**NIH 1R01CA221854** (PI: Manne, Sub-PI: Pagoto) $499,364  
Facebook Intervention of Young Onset Melanoma Patients and Families  
This project involves a social media delivered intervention for melanoma patients and families.

**NIH 1R01CA218068-01** (PI: Stapleton, Sub-PI: Pagoto) $486,807  
Randomized Trial of a Social Media-Delivered Intervention Targeting Indoor Tanning Users  
This project aims to develop an intervention for indoor tanning users that is delivered via secret groups using the social media site Facebook.
Research

**NIH 1R01AI158818-01** (PI: Buller, Sub-PI: Pagoto) $54,569 04/01/21-03/31/24
Preventing COVID-19 with a Social Media Intervention: Vaccine Acceptance and Physical Distancing

The goal of this project is to increase adults aged 18-64 COVID19 prevention behaviors, specifically social distancing behavior and vaccine intentions, using a social media campaign designed to a) promote COVID19 NPIs and vaccination using principles of risk communication, b) improve adults’ media literacy for digital messages to combat critical information and misinformation, and c) improve family communication on COVID19 NPIs and vaccination.

**NIH R01CA210259** (PI: Buller, Sub-PI: Pagoto) $133,917 08/01/17-07/31/22
Using Technology to Scale-up an Occupational Sun Protection Policy Program

This project is testing sun protection practices for outdoor workers using an in-person vs. web-delivered intervention.

**USDA/CAHNR Capacity Grant** (PI: Duffy; Co-I: Waring) $30,000 10/01/18-09/30/21
Tailored messages for health promotion and obesity prevention using e-health and m-health

We will evaluate a nutrition and health message program delivered via internet and mobile technologies that is tailored to the individual's usual behaviors and the availability of healthy foods for obesity prevention in children in a clinical setting, middle-school students, and college students.

**Completed Projects**

**NIH 5R01DK103944-02** (PI: Pagoto) $2,666,387 09/25/15-07/31/20
Get Social: Randomized Trial of a Social Network Delivered Lifestyle Intervention

The purpose of the study is to conduct a randomized controlled trial to compare the efficacy of an online social network delivered intervention to a traditional in-person group-based lifestyle intervention. We hypothesize that an online social network intervention will not be inferior to the traditional delivery approach.

**NIH 1R21CA226133-01** (PI: Pagoto) $376,782 04/01/18-03/31/21
Using a Narrative-Based Approach to Reducing Indoor Tanning

The purpose of this project is to develop and test the feasibility of a narrative-based social media intervention for indoor tanning that will ultimately be implemented by Skin Smart Campus, a national initiative co-chaired by the PI to promote skin cancer prevention policy and education on university campuses nationwide.
Research

**NIH 1R01CA192652-01** (PIs: Buller, Pagoto) $812,483 06/01/15-12/31/20
Likes Pins and Views: Engaging Moms on Teen Indoor Tanning Thru Social Media

This study proposes to develop and evaluate the effectiveness of a social media indoor tanning campaign to decrease mothers' permissiveness for, and prevalence of, indoor tanning by daughters and increase mothers' support for policy restrictions on indoor tanning by minors to improve the effectiveness of indoor tanning regulations.

**NIH K24HL124366** (PI: Pagoto) $491,310 04/07/15-03/31/20
Mentoring in mHealth and Social Networking Interventions for CVD Risk Reduction

This mid-career development award is designed to support a mentorship plan in mHealth research for cardiovascular disease prevention.

**NSF 2028341** (PIs: Pagoto, Waring) $71,408 05/01/20-04/30/21
RAPID: Differential Impacts of the COVID-19 Pandemic on Undergraduate STEM Education by Student Gender, Race/Ethnicity, and Socioeconomic Status

We propose a mixed-methods study to describe in a representative sample of undergraduate STEM students from varied backgrounds: 1) the transition away from campus, 2) the challenges experienced, 3) the degree to which challenges affected attendance, academic performance, withdrawal rates, and college dropout rates, and 4) factors that facilitated success or failure among underresourced and underrepresented students.

**NIH 3R01CA218068-03S1** (PIs: Arroyo, Stapleton) $55,469 06/01/19-05/31/21
Participant Engagement and Sharing of Misinformation in a Cancer Prevention Facebook Group for Moms

The purpose of this diversity supplement is to conduct a mixed-methods analysis of participant engagement data from a large randomized trial (N=972) of a Facebook-delivered cancer prevention intervention. Findings will advance the field of social media interventions for cancer control by revealing insights on how to design effective prevention messages.

Pending Projects

**NIH R01CA269918** (PI: Pagoto) $1,207,000 04/01/22-03/31/25
Pilot and Feasibility Trial of a Facebook-Delivered Parent-Focused Sunburn Prevention Intervention for Youth Soccer Players

The proposed study will develop and pilot test a social media campaign to activate parents to help their sport-engaged adolescents to build good sun safety habits.
Publications

Peer-Reviewed


Publications


Publications


Publications

Public Facing, News, and Popular Media

Staunchly committed to science communication, Dr. Pagoto regularly contributes to news stories and media pieces on a wide range of topics.

Breaking the mask habit: Why some people find it hard to let go. CT Post. May 29, 2021
Teens’ physical activity declines during pandemic, substance use persists. Heali. May 28, 2021
Rethinking How We Talk About Obesity. Connecticut Public Radio. April 8, 2021
Doctors and techies are clashing at digital health companies, and one start-up exec is seeking a fix. CNBC. March 5, 2021
12 Little Things That Will Improve Your Health in Just One Minute. Health. March 5, 2021
Dr. Sherry Pagoto discusses COVID-19 vaccine safety, efficacy. UConn Daily Campus. March 1, 2021
Body image: News 12 talks to clinical psychologist about Zoom and body dysmorphia. News12 CT. February 26, 2021
Experts: Zoom meetings could cause body image issues. CT Post. February 16, 2021
Could athlete vaccinations help America beat the pandemic? Yahoo News. December 29, 2020
How influencers are being recruited to promote the Covid-19 vaccine. VOX. December 14, 2020
Meaningful engagement key to weight-loss success in social media intervention programs. Heali. November 17, 2020
UConn Researcher Receives CDC Grant to Develop Social Media-Based Intervention to Prevent Gun Injury. UConn Today. October 20, 2020
An Open Letter to University Leadership. Inside Higher Ed. October 15, 2020
As QAnon Conspiracy Theories Draw New Believers, Scientists Take Aim at Misinformation Pandemic. NewsWeek. October 14, 2020
15 Things Therapists Do When They’re Anxious Watching The Debates. HuffPost. October 7, 2020
Coronavirus conversation: Why the pandemic matters in the 2020 election. CT Mirror. October 6, 2020
What To Do If Family Or Friends Shares Misinformation On Facebook. HuffPost. September 22, 2020
Colleges vs. parties. Axios. August 30, 2020
Will Shame Make Students Stop Socializing? Inside Higher Ed. August 21, 2020
Higher Ed’s Moment of Truth. Inside Higher Ed. August 18, 2020
Screen College Students for COVID Every 2 Days, Researchers Advise. Voices of America. August 12, 2020
A novel idea: Ask students what they think about returning to campus. The Hechinger Report. July 17, 2020
After Cruise Ships and Nursing Homes, Will Universities Be the Next COVID-19 Tinderboxes? TIME. July 9, 2020
Trainings

In the 2020-2021 academic year, the Center hosted 10 free webinars. We plan to offer future webinars on a monthly basis in the upcoming year. See the upcoming webinars on our website, mhealth.inchip.uconn.edu.


Access to care and ethical issues in the use of mHealth for HIV prevention in LMICs: A case example from Malaysia. Presented by Roman Shrestha, PhD, MPH. Friday, March 19th. https://youtu.be/Uyga4Jn9JWQ

Introduction to social network analysis in mHealth and social media research. Presented by Ran Xu, PhD. Tuesday, February 23rd. https://youtu.be/lqWfQItFOs8

What is a “K” career development award and how to get one funded. Presented by Sherry Pagoto, PhD. Wednesday, January 27th. https://youtu.be/Pgmo5h6NcIs

Using Rtweet and NCapture to gather Twitter data. Presented by Molly Waring, PhD. Wednesday, December 9th. https://youtu.be/cNZmuLy8NVg

Health tech is tech: What you should know as you transition into an industry role. Presented by Gina Merchant, PhD. Tuesday, November 10th. https://youtu.be/_k7XgRZfM6g

Who will use it, choose it, and pay the dues for it? Understanding stakeholder needs in healthcare. Presented by Kate Wolin, PhD. Wednesday, October 21st. https://youtu.be/uxvuFsuLrCs

How did you get that job? A career path panel. Moderated by Sherry Pagoto, PhD. Panelists included Dr. Heather Cole-Lewis, PhD, MPH, Dr. Chad Rethorst, PhD, Dr. Beth Linas, PhD, MHS, Wednesday, September 30th. Please note this event was live-only; a recording of the panel is not available.

How to turn your science into a short video. Presented by Matthew Schroeder and Laurie Groshon. Monday, August 31st. https://youtu.be/xX77xUoOfE8

Appearances

Regional/National/International Meetings


Invited Talks


Appearances

Invited Talks


Conference Presentations


2. Foye, Q., Horkachuck, A., Waring, M.E. Mothers’ experiences with food pantries during the COVID 19 pandemic and interest in mobile food pantries. Poster presentation by Q Foye at Frontiers, Undergraduate Research Online Exhibition, University of Connecticut, 22-26 March 2021, Storrs, CT. Video available at: https://www.youtube.com/watch?v=UoTYlVXxtIA&t=29


Appearances

Conference Presentations


The COVID-19 pandemic has made it abundantly clear how misinformation on the internet can have dire public health consequences and the important role scientists have in communicating to the public. At this two-day conference we discussed how scientists, clinicians, public health professionals, and patients can work together to counteract the infodemic. JMIR Infodemiology sponsored the Opening Keynote and Video Poster Awards. The virtual format also allowed the Center to record and publish each talk for on-demand viewing.

Keynotes

Dear Pandemic: Nerdy Girls Navigating the COVID-19 Overwhelm. Alison Buttenheim, PhD (University of Pennsylvania)

Collaborating with Patient Advocacy Groups on Social Media to Research the Long-term Health Impacts of COVID-19. Natalie Lambert, PhD (Indiana University)

Speak to the Wounds: (Re)coding Behavioral Health Equity & Advancing Radical Healing Among Black Males. Wizdom Powell, PhD (UConn Health)

COVID Mis/disinformation and Communication: Overcoming Hurdles on the Uphill Climb to Herd Immunity. Scott Ratzan, MD, MPA, MA (CUNY Public Health)

Panelists

Monica Wang, ScD, MS (Boston University)
Jessica Gold, MD, MS (Wash U St. Louis)
Eleanor Murray, ScD (Boston University)
Eugenia South, MD, MSHP (Penn)
Natalie Shook, PhD (UConn)
Jasmin Tiro, PhD (University of Texas)

Paper Presenters

Michael P Lynch, PhD (UConn)
Yuki Lama, PhD (NIH)
Michael Haupt, MS (UC San Diego)
David Buller, PhD (Klein Buendel)
Alec Calac, BS (UC San Diego)
Alexandra Kenefake, MBS (UI Chicago)

Audience

262 Registrants from 127 Institutions, 31 US States, 21 Countries, and 6 Continents
The conference also featured six oral paper presentations and 34 video posters. Attendees viewed these two-minute video posters at their leisure and participated in informal breakout discussions with the poster authors over zoom. Affiliate faculty member Roman Shrestha, MPH, PhD and JMIR Infodemiology Editor-in-Chief Tim Mackey, MAS, PhD selected seven video poster authors and attendees to receive awards; each recipient received 500 JMIR Karma credits or an invitation to publish in a JMIR journal. All video posters are available for viewing on our YouTube playlist.

**JMIR Infodemiology Editor's Picks**


**Best Student Video**

**Best Videos**
Molly Waring, University of Connecticut, Factors Associated with COVID-19 Vaccine Hesitancy among Mothers of Children 0-12 Years Old. [https://youtu.be/8y0twaYjCBQ](https://youtu.be/8y0twaYjCBQ)

Arcana Krishnan, University of Albany (SUNY), Documenting Disparities in Technology Access, Information-Seeking and Vaccine Hesitancy during the COVID-19 Pandemic in New York’s Capital Region. [https://youtu.be/66gA_kjjN-c](https://youtu.be/66gA_kjjN-c)

**Most Viewed Video**
Mayank Sakhija, University of South Carolina, Communicating online with patients during a pandemic: An analysis of Covid-19 information on outpatient clinic websites. [https://youtu.be/GW5NlBqhqBk](https://youtu.be/GW5NlBqhqBk)

**Most Engaged Conference Attendee**
Anne Oeldorf-Hirsch, University of Connecticut

---

**Save the Date: May 19-20, 2022**
6th Annual Virtual Conference