Yale School of Public Health faculty had an extremely busy 2021 conducting extensive research to find solutions to not just the ongoing pandemic, but a wide range of other issues that affect people locally, nationally and globally.

In 2021, YSPH faculty published more than 1154 publications covering a broad spectrum of pressing public health matters. These appeared in top scientific journals including JAMA, Lancet, Proceedings of the National Academy of Sciences and Nature—often in collaboration with other Yale University scientists, but also with peers from other academic institutions in the U.S. and beyond. Of these publications, 810 (70.2%) had a primary YSPH member as an author; 344 of the 810 (42%) had a YSPH faculty member as a first or last author. Naturally, in the second year of the pandemic, many of these first- or last-author publications (72) addressed COVID-19. But their research also concerned many other important areas: other infectious diseases, maternal child health, cancer, global health, mental health and health equity/social justice. Some of the publications focused on Yale’s home state, Connecticut, while others tackled national and world health problems.

YSPH’s six academic departments are home to more than 150 full-time faculty and research scientists, along with 50 postdoctoral fellows. Our research was bolstered by $60 million in grant funding in FY21, comprised of a total of 192 grants.

We salute and thank all of our faculty, as well as the students, postdocs and research staff, for their achievements in the cause of advancing public health around the planet. We look forward to continuing and expanding upon our successes in 2022, as we work with colleagues both at Yale and beyond to create a shared and equitable vision of public health for all.

Melinda Irwin, Ph.D., M.P.H.
Associate Dean of Research and Susan Dwight Bliss Professor of Epidemiology (Chronic Diseases)
<table>
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<tr>
<th>Title</th>
<th>Journal</th>
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<tr>
<td>Clinical and Economic Effects of Widespread Rapid Testing to Decrease SARS-CoV-2 Transmission</td>
<td><em>Annals of Internal Medicine</em></td>
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<td>Assessing COVID-19 Prevention Strategies to Permit the Safe Opening of Residential Colleges in Fall 2021</td>
<td><em>Annals of Internal Medicine</em></td>
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<td>COVID-19 Testing and Case Rates and Social Contact Among Residential College Students in Connecticut During the 2020–2021 Academic Year</td>
<td><em>JAMA Network Open</em></td>
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<td>Optimal COVID-19 quarantine and testing strategies</td>
<td><em>Nature</em></td>
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<tr>
<td>Promoting COVID-19 vaccine acceptance: recommendations from the Lancet Commission on Vaccine Refusal, Acceptance, and Demand in the USA</td>
<td><em>Lancet</em></td>
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<tr>
<td>SalivaDirect: A simplified and flexible platform to enhance SARS-CoV-2 testing capacity</td>
<td><em>Med (New York)</em></td>
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<tr>
<td>Multiplex qPCR discriminates variants of concern to enhance global surveillance of SARS-CoV-2</td>
<td><em>PLOS Biology</em></td>
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<td>Adaptive Policies to Balance Health Benefits and Economic Costs of Physical Distancing Interventions during the COVID-19 Pandemic</td>
<td><em>Society of Medical Decision Making</em></td>
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<td>Role of meteorological factors in the transmission of SARS-CoV-2 in the United States</td>
<td><em>Nature</em></td>
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<tr>
<td>Kynurenic acid may underlie sex-specific immune responses to COVID-19</td>
<td><em>Science Signaling</em></td>
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<tr>
<td>One year of modeling and forecasting COVID-19 transmission to support policymakers in Connecticut</td>
<td><em>Nature</em></td>
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<td>Neighborhood Social Cohesion and Inequalities in COVID-19 Diagnosis Rates by Area-Level Black/African American Racial Composition</td>
<td><em>Journal of Urban Health</em></td>
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<td>Odds of Testing Positive for SARS-CoV-2 Following Receipt of 3 vs 2 Doses of the BNT162b2 mRNA Vaccine</td>
<td><em>JAMA Internal Medicine</em></td>
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<td>Maximizing the Efficiency of Active Case Finding for SARS-CoV-2 Using Bandit Algorithms</td>
<td><em>Medical Decision Making</em></td>
</tr>
</tbody>
</table>
Infectious Disease/Global Health

*Proceedings of the National Academy of Sciences*
Mapping partner drug resistance to guide antimalarial combination therapy policies in sub-Saharan Africa

*Lancet HIV*
Messaging matters: achieving equity in the HIV response through public health communication

Health Policy

*Society for Clinical Trials*
US Food and Drug Administration utilization of postmarketing requirements and postmarketing commitments, 2009–2018

*Health Affairs*
Chilling Effects: US Immigration Enforcement And Health Care Seeking Among Hispanic Adults

*JAMA Network Open*
Characterization of US Hospital Advertising and Association With Hospital Performance, 2008–2016

*JAMA Health Forum*
Evaluation of the Association Between Medicare Eligibility and Excess Deaths During the COVID-19 Pandemic in the US

*Health Services Research*
1% Steps for Health Care Reform: Implications for health care policy and for researchers

“The past two years represented a historic high for research productivity for our faculty. One YSPH paper was among the “Ten Most Read Papers of 2021” in *Health Affairs*, and another, in the *Annals of Internal Medicine*, was in their “Best of 2021 Collection.” This follows the most highly cited paper of 2020 in *JAMA Internal Medicine*. We are proud of the extraordinary work here in the YSPH community of local, national, and global relevance.”  

—DEAN STEN VERMUND, M.D., PH.D.
## Cancer and Associated Risk Factors

<table>
<thead>
<tr>
<th>Journal of Preventive Medicine</th>
<th>Impact of the Affordable Care Act on Colorectal Cancer Incidence and Mortality</th>
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<tr>
<td><em>JAMA Network Open</em></td>
<td>Analysis of Sociodemographic, Clinical, and Genomic Factors Associated With Breast Cancer Mortality in the Linked Surveillance, Epidemiology, and End Results and Medicare Database</td>
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<td><em>JAMA Oncology</em></td>
<td>Changes in Prostate-Specific Antigen Testing Relative to the Revised US Preventive Services Task Force Recommendation on Prostate Cancer Screening</td>
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<tr>
<td><em>Journal of Clinical Oncology</em></td>
<td>Cost-Effectiveness of Adjuvant Treatment for Ductal Carcinoma In Situ</td>
</tr>
<tr>
<td><em>Journal of Gynecological Oncology</em></td>
<td>Randomized trial of exercise on depressive symptomatology and brain derived neurotrophic factor (BDNF) in ovarian cancer survivors: The Women's Activity and Lifestyle Study in Connecticut (WALC)</td>
</tr>
<tr>
<td><em>Public Health Reports</em></td>
<td>Trends in Precancerous Cervical Lesions by Area-Based Measures of Poverty, Race, and Ethnicity, Connecticut, 2008–2018</td>
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<tr>
<td><em>JAMA Pediatrics</em></td>
<td>A Difference-in-Differences Analysis of Youth Smoking and a Ban on Sales of Flavored Tobacco Products in San Francisco, California</td>
</tr>
<tr>
<td><em>Cancers/Basel</em></td>
<td>Molecular Mechanisms of Alcohol-Induced Colorectal Carcinogens</td>
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## Maternal and Child Health

<table>
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<tr>
<th><em>Current Developments in Nutrition</em></th>
<th>Responsive Feeding Recommendations: Harmonizing Integration into Dietary Guidelines for Infants and Young Children</th>
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<tr>
<td><em>BMJ Open</em></td>
<td>Preterm birth among Pacific Islander women and related perinatal outcomes: a scoping review protocol</td>
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<tr>
<td><em>Journal of Epidemiology and Community Health</em></td>
<td>Longitudinal effects of perinatal social support on maternal depression: a marginal structural modelling approach</td>
</tr>
<tr>
<td><em>Current Environmental Health Reports</em></td>
<td>Intrauterine Exposure to Acetaminophen and Adverse Developmental Outcomes: Epidemiological Findings and Methodological Issues</td>
</tr>
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</table>
Substance Use

*Journal of Substance Abuse Treatment*
Changes in methadone program practices and fatal methadone overdose rates in Connecticut during COVID-19

*APA PsycNet*
The role of emotion dysregulation in the association between substance use stigma and depressive symptoms among trauma-exposed, substance-using individuals.

*Journal of Ethnicity in Substance Abuse*
Sociopolitical control as a mediator between ethnic identity and social support on 30-day drug use among black girls

*Journal of the National Cancer Institute*
Predictors of Chronic Opioid Use: A Population-Level Analysis of North Carolina Cancer Survivors Using Multi-Payer Claims

Health Equity/Mental Health

*International Journal of Environmental Research and Public Health*
Racial and Gender Discrimination Predict Mental Health Outcomes among Healthcare Workers Beyond Pandemic-Related Stressors: Findings from a Cross-Sectional Survey

*Psychiatry Online*
Current Capacity and Future Implementation of Mental Health Services in U.S. LGBTQ Community Centers

*Social Science and Medicine*
Does rental assistance improve mental health? Insights from a longitudinal cohort study

*JAMA Network Open*
Assessment of Perceptions of Mental Health vs Medical Health Plan Networks Among US Adults With Private Insurance

“We salute and thank our faculty, as well as the students, postdocs and research staff, for their achievements in the cause of advancing public health around the planet.”

—MELINDA IRWIN, PH.D., M.P.H.
’Omics/Data Science

*Genome Biology*
SUPERGNOVA: local genetic correlation analysis reveals heterogeneous etiologic sharing of complex traits

*Hepatology Communications*
Lipidomics and Redox Lipidomics Indicate Early Stage Alcohol-Induced Liver Damage

*Journal of the American Statistical Association*
Brain Regions Identified as Being Associated with Verbal Reasoning through the Use of Imaging Regression via Internal Variation

*Neuro-oncology*
Environmental and sex-specific molecular signatures of glioma causation

Environmental Health

*Toxicological Sciences*
Identification of Dose-Dependent DNA Damage and Repair Responses From Subchronic Exposure to 1,4-Dioxane in Mice Using a Systems Analysis Approach

*Environmental Health Perspectives*
Invited Perspective: Oil and Gas Development and Adverse Birth Outcomes: What More Do We Need to Know?

*Current Environmental Health Reports*
Use of Exposomic Methods Incorporating Sensors in Environmental Epidemiology

*Lancet Planet Health*
Ambient carbon monoxide and daily mortality: a global time-series study in 337 cities

Aging

*The Journals of Gerontology*
Impact of Media-based Negative and Positive Age Stereotypes on Older Individuals’ Mental Health during the COVID-19 Pandemic

*Preventive Medicine*
Diversity of social networks versus quality of social support: Which is more protective for health-related quality of life among older adults?
Cardiovascular Diseases

**Annals of Surgery**
Reassessing the July Effect: 30 Years of Evidence Show No Difference in Outcomes

**American Journal of Preventive Medicine**
Awareness of Diabetic Retinopathy: Insight From the National Health and Nutrition Examination Survey

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