

## Nicole Cassarino

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### EDUCATION

- July 2022-Present **Tufts University School of Medicine**, Boston, MA  
MD Candidate  
Honors: Induction into Health Justice Scholars Program
- May 2020-May 2021 **Tufts University School of Medicine**, Boston, MA  
Master of Public Health Program, Concentration: Epidemiology & Biostatistics  
Honors: graduated summa cum laude. Inducted into *Honos Civicus* Honor Society  
GPA: 3.88/4.00
- Aug 2013-May 2017 **Cornell University**, Ithaca, NY  
Bachelor of Liberal Arts, Major: Psychology (Pre-Medical Track)  
Honors: graduated summa cum laude, Alpha Sigma Lambda Honor Society, Dean's List  
Academic Achievement Award  
GPA: 3.86/4.00

### RESEARCH

- Sept 2023 – Present **Student Visitor Research Administrative Assistant for Laboratory for Affective Translational Neuroscience**, McLean Hospital, Belmont, MA
- Aug 2023 - Present **Research Analyst for Dr. Neha Sharma and Dr. Eunice Yuen**, Tufts University, Boston, MA and Yale University, New Haven, CT  
**Project: “Acting Together: Addressing Cultural Dilemmas in the Clinical Setting”**
  - I am currently involved in leading focus groups, designing the qualitative analysis and analyzing qualitative data for a multi-site study on the psychological impacts of cultural dilemmas faced by Asian-American and Pacific Islander professionals working in the healthcare setting.
- Sept 2020 – Present **First Author/Research Intern for Dr. Alysse Wurcel**, Tufts Medical Center, Boston, MA  
**Project 1/5: “It’s Not A Carrot Dangling”: Impressions of Vaccination Among Health Services Administrators in Massachusetts Jails**
  - I completed a two-semester, for-credit internship at Tufts Medical Center, assisting an infectious disease physician with a study of COVID-19 and influenza vaccination uptake rates among people detained in the MA jail system. I renewed this position for another year, not for-credit.
  - As first author, I designed a qualitative research study to assess the beliefs and attitudes around vaccination among Health Services Administrators (HSAs) in the Massachusetts (MA) jails.
  - I created an IRB-approved questionnaire based on the Theoretical Domain Framework (TDF) which I then used to interview HSAs from each MA jail.
  - I used qualitative research methods to operationalize focus group findings to identify facilitators and barriers to promotion of vaccination in carceral settings.
  - Published in the Journal of Clinical and Translational Medicine, January 2023.
  - I presented findings of this study at the American Consortium on Criminal Justice Health Virtual Conference in April 2022 and at the IDWeek Conference in Washington, DC in October 2022.

### **Project 2/5: Trends in Vaccine Ordering in Massachusetts Jails During the COVID-19 Pandemic**

- As first author, I led a study analyzing trends in COVID-19 and influenza vaccine ordering and distribution in MA county jails before and during the COVID-19 pandemic 1) between MA jails themselves and 2) between MA jails and the community.
- I cleaned and analyzed raw data from the MA Department of Public Health using Stata and SAS statistical softwares.
- I created a novel method to calculate immunization rates among a highly-transient and ever-changing population of individuals incarcerated in MA jails.
- This manuscript is currently under review by the journal *Vaccine*.

### **Project 3/5: Analysis of Sickle Cell Disease Consideration During Intake In Jails**

- I am designing and co-leading a multi-institution study on the experiences of individuals who were incarcerated with a diagnosis of Sickle Cell Disease along with researchers from Tufts Medical Center, Harvard Medical School, and Drs. Sharl Azar from Massachusetts General Hospital and Dr. Maureen Achebe from Boston Medical Center.

### **Project 4/5: Fighting Antibiotic Resistance in Carceral Settings (FABRICS) Study**

- I am executing statistical analysis of large datasets from the Massachusetts and Maine Departments of Corrections to promote robust antimicrobial stewardship in these systems.
- I am creating a logistic regression model to determine the odds of being prescribed ceftriaxone for patients who have been labeled penicillin-allergic.
- I work with DOCs and their IRBs in other states, including Wisconsin, Minnesota and Washington, to build data-sharing partnerships to support this project.

### **Project 5/5: Endocarditis and MOUD**

- I led a systematic review of meta-analyses published on endocarditis and opioid use disorder (OUD) since 2016, when medication for opioid use disorder (MOUD) became the standard of care for OUD patients.
- Recommendations based on this review will be published in a letter to the editor in an upcoming article of the *American Journal of Cardiology*.

Jan 2021 – Dec 2021 **First Author/Research Intern for Dr. Lisa Gualtieri**, Tufts University School of Medicine  
Boston, MA

- **Project 1/1: Monitoring Older Adult Blood Pressure Trends At Home as a Proxy for Brain Health**
- Using a design-thinking process, I conceptualized and designed a digital health application which can be used to help older adults predict their risk for dementia by creating patient-generated health data (PGHD) measuring their blood pressure regularly in their homes, enabling them to age in place in their homes longer.
- I collaborated with content experts in the field of aging and health from AARP to gather qualitative data on the health needs of older adults who wish to age in place in their homes.
- I performed focus group interviews with potential end users of my proposed digital health solution.
- I then recruited a pediatrician and software engineer and worked with them both to create a smartphone application prototype of this solution. We aim to pilot it among several primary care physicians who serve older adult patients at risk for dementia in the Greater Boston area.

- As first author, I led the writing of the manuscript.
- This study was published in the Online Journal of Public Health Informatics in December 2021.

Sept 2018 – May 2021 **First Author/Research Intern for Dr. Monik Jiménez**, Harvard Medical School, Division. of Women’s Health, Boston, MA

**Project 1/3: Individuals Speak: Incarcerated During the COVID-19 Epidemic (INSIDE)**

- As first author, I conceptualized, designed and executed a nationwide survey of the conditions of confinement for individuals incarcerated in the US during the COVID-19 pandemic.
- I led survey development and piloting of the finalized instrument by co-leading focus groups with formerly-incarcerated members of our community advisory board.
- I contributed to the design of a novel distribution method which took into account Partners Healthcare IRB restriction on directly surveying vulnerable populations, including incarcerated individuals.
- I led preparations for Partners Healthcare IRB submissions.
- I led programming of the web-based survey using REDCap software.
- I developed the analysis plan and executed the biostatistical analysis of survey data using Stata software. I also led sensitivity analyses to further analyze findings.
- I used imputation techniques to account for missing data points.
- I led the writing of the manuscript along with co-authors.
- I presented findings at the 2020 Discover Brigham Academic Conference in Boston, MA (virtual) and the 2021 American Consortium on Criminal Justice Health in Worcester, MA (virtual).
- I presented findings of a sub-analysis of data from the INSIDE study at the 2021 American Public Health Association Conference in Denver, CO (virtual).
- This article was published in Spring 2023 in *Health Equity*.

**Project 2/3: Epidemiology of COVID-19 Among Incarcerated Individuals and Staff in Massachusetts Jails and Prisons**

- I worked with biostatisticians from the American Civil Liberties Union (ACLU) to collect and analyze data on the number of COVID-19 cases and tests among individuals incarcerated in MA jails.
- I assisted with the calculation of COVID-19 case rates and rate ratios using R software.
- I contributed to the writing of the manuscript by summarizing findings.
- This study was published in the Journal of the American Medical Association (JAMA) in August 2020.

**Project 3/3: The association between social support and cardiovascular disease among adults incarcerated in US state prisons.**

- As first author, I conceptualized, designed and executed a research project investigating the association between social participation and cardiovascular disease (CVD) among adults incarcerated in the US.
- I performed a preliminary research review to identify gaps in literature regarding CVD and social participation among adults incarcerated in state prisons.
- I cleaned and analyzed data from a large and publicly available dataset from the Bureau of Justice Statistics to test associations between social support and CVD outcomes among individuals incarcerated in state prisons throughout the US.
- I performed logistic regressions to test for crude and adjusted associations between odds of having social support and odds of having a cardiovascular disease among subjects.
- Based on the preliminary literature review, I created a conceptual model to explain significant associations found in my analyses.

- Based on the preliminary literature review, I created a causal model to explain potential confounding between the independent and dependent variables.
- I created data visualizations of findings using SAS and Excel software.
- I drafted an abstract and presented preliminary findings at the 2019 New England Science Symposium and the 2019 Brigham's Commitment to Health Equity Conference.

## PROFESSIONAL EXPERIENCE

- Oct 2020 – Aug 2023    **Official Position Title:** Research Intern  
**Duties:** Please see above under “Research” for description of duties  
**Employer and Address:** Tufts Medical Center, Department of Geographic Medicine and Infectious Disease, 800 Washington Street, Boston, MA 02111  
**Supervisor’s Name and Phone:** Dr. Alysse Wurcel (617) 636-7010  
**Part-Time Status:** 10 hours per week (while in school) and full time during summers
- Jan 2021 – July 2021    **Official Position Title:** Research Intern  
**Duties:** Please see above under “Research” for description  
**Employer and Address:** Tufts University School of Medicine, 35 Harrison Avenue, Boston, MA 02111  
**Supervisor’s Name and Phone:** Dr. Lisa Gualtieri (617) 636-0438  
**Part-Time Status:** 15 hours per week (while in graduate school)
- Sept 2018 – May 2021    **Official Position Title:** Research Intern  
**Duties:** Please see above under “Research” for description  
**Employer and Address:** 1620 Tremont Street, Boston, MA 02120  
**Supervisor’s Name and Phone:** Dr. Monik Jimenez (617) 525=6858  
**Full-Time Status:** 40 hours per week
- Nov 2013 – Jan 2015    **Official Position Title:** Respite Care Provider  
**Duties:**
  - Worked with teens with mental health conditions including autism spectrum disorder, Asperger’s Syndrome, Bipolar Disorder and history of emotional/sexual abuse
  - Helped teens develop coping skills to manage their symptoms in their homes and communities
  - Consulted with family members to discuss best support practices for each teen**Employer and Address:** Mental Health Association of Tompkins County, 450 E State Street, Ithaca, NY 14850  
**Supervisor’s Name and Phone:** Josephine Gibson (607) 273-9250  
**Full-Time Status:** 36 hours per week

## LEADERSHIP

- June 2023 - Present    **Immigrant Health Curriculum Development Intern, Tufts University School of Medicine in Partnership with Cambridge Health Alliance**
  - I was selected for this paid position to participate in the legacy of developing a new elective for fourth year medical students at TUSM to learn about immigrant health
  - I lead focus groups and review data to design an immigrant health curriculum that will set graduating MD students up for success in treating immigrant patients.
- Dec 2022 - Present    **Co-President and Co-Founder, Addiction Medicine Interest Group, Tufts University School of Medicine**

- I organize the speaker series including Dr. Amanda Von Horn, Addiction Medicine Psychiatrist
- I organized and ran a Harm Reduction Day event where participants packaged kits to help patients who inject drugs do so safely; physicians and social workers were invited to speak about supporting patients with Substance Use Disorder

Nov 2022 - Present

**Co-President, Psychiatry Interest Group, Tufts University School of Medicine**

- organized and led a M4 Match Panel where M4 students at TUSM who matched in Psychiatry residency shared their experiences with M1 students

Nov 2022 - Present

**Secretary, First Generation in Medicine Student Interest Group (FGiM), Tufts University School of Medicine**

- Worked with M1 Diversity, Equity and Inclusion Representatives to plan a celebration of diverse identities in medicine, including FGiM students and FGiM physicians

July 2022 - Present

**Medical Education Curriculum Representative (MECR), Tufts University School of Medicine**

- I represent my class to the medical education curriculum committee for the course “Clerkship and Apprenticeship in Primary Care” at TUSM.

Oct 2020 – May 2021

**Student Senator, Tufts University School of Medicine Public Health and Professional Degree Program**

- I served as the student representative on the TUSM PHPD Admissions Committee. My responsibilities include working alongside faculty and staff to review applications of prospective students as well as collaborating with other committee members to develop best practices for admitting applicants.

May 2020 – Jan 2021

**Project Student Leader, Tufts University School of Medicine Return to Campus (R2C) Committee**

- I led a team of 10 students in my MPH cohort on a weekly review of emergent academic literature related to COVID-19. We summarize these articles and provide summaries to the campus administration to help shape best practices around reopening Tufts’ campuses.

Jan 2020 – May 2021

**Coordinator (volunteer), Brigham and Women’s Hospital Young Professional Group (BWHYP)**

Brigham and Women’s Hospital, Boston, MA

- I was responsible for facilitating communications and promoting events to enhance career development for young professionals at Brigham and Women’s Hospital. I am also responsible for working with other BWHYP members to develop professional development programming for group members.
- I developed and now lead the BWHYP Diversity and Inclusion-Focused Book Club

April 2016 – May 2019

**Harvard Cancer Society Bone Marrow Liaison**

Harvard University, Cambridge, MA

- I served as the bone marrow liaison on the Harvard Cancer Society as an alumna. I organize, advertise and lead bone marrow drives on campus along with student volunteers one to two times per semester to register students as bone marrow donors.
- To date, I have registered over 5,000 individuals as bone marrow donors between 2008 and 2021.

## JOURNAL ARTICLES IN PRESS:

- March 2023 **Cassarino, N.**, Dabbara, H., Bennett, D., Bembury, A., Credle, L., Ghandri, U., Patil, A., Yen, M.L., Jimenez, M. Individuals Speak: Incarcerated During the COVID-19 Epidemic. *Health Equity*. DOI: 10.1089/heq.2022.0017.
- January 2023 **Cassarino, N.**, Lodolo, L., Smyth, E., Ramaswamy, M., & Wurcel, A. (2023). “The bottom line is that it is all about trust”: Interviews with Health Services Administrators about perceived barriers and facilitators to vaccine administration in jails. *Journal of Clinical and Translational Science*, 1-19. DOI:10.1017/cts.2022.519
- August 2022 **Cassarino, N.** & Boku, Y. (Fall 2022). Sick Cell Anemia: A Primer for Correctional Health Care Professionals. *CorrectCare (The magazine of the National Commission on Correctional Health Care)*.
- December 2021 **Cassarino, N.**, Bergstrom, B., Johannes, C., Gualtieri, L. (24 Dec 2021). Monitoring Older Adult Blood Pressure Trends at Home as a Proxy for Brain Health. *Online Journal of Public Health Informatics*.
- August 2020 Jimenez, M.C., Cowger, T.L., Simon, L.E., Behn, M., **Cassarino, N.**, Bassett, M.T., (21 Aug 2020). Epidemiology of COVID-19 Among Incarcerated Individuals and Staff in Massachusetts Jails and Prisons. *JAMA Open Network*.

## UNPUBLISHED WORK:

- Expected Fall 2023* **Cassarino, N.**, & Wurcel, A. Publications about the Epidemiology of Endocarditis Should Discuss Harm Reduction Tools and Medications for Opioid Use Disorder. *The American Journal of Cardiology*.
- Expected Fall 2023* **Cassarino, N.**, Ahnger-Pier, K.K., Wurcel, A., MD. Trends in COVID-19 and Influenza Vaccine Ordering and Distribution in Massachusetts Jails. *Vaccine*.
- Expected October 2023* **Cassarino, N.**, Kiel, A., Howe, R., Finn, L. Physician satisfaction post-implementation of mindfulness-based group medical visits for type 2 diabetes. To be presented at the 2023 North American Primary Care Research Group (NAPCGR) Conference, San Francisco, CA.

## POSTER PRESENTATIONS

- October 2022 **Cassarino, N.** Lodolo, L., Smyth E., Wurcel, A. The bottom line is that it is all about trust”: Interviews with Health Services Administrators about perceived barriers and facilitators to vaccine administration in jails. Presented at IDWeek Conference, Washington, DC.
- October 2022 **Cassarino, N.** Wurcel, A. COVID-19 Vaccine Distribution in Massachusetts Jails. Presented at Earl P. Charlton Poster Competition, Tufts University School of Medicine, Boston, MA.
- October 2022 **Cassarino, N.** Wurcel, A. COVID-19 Vaccine Distribution in Massachusetts Jails. Presented at IDWeek 2022, Washington, DC.
- April 2022 **Cassarino, N.**, Lodolo, L., Smyth, E., Wurcel, A. Multiple-Methods Analysis of 2019 and 2020 Influenza Vaccination in Massachusetts Jails. The 2021 Correctional Health Conference, Academic Consortium on Criminal Justice Health, Worcester, MA.
- October 2021 **Cassarino, N.**, Dabbara, H., Bennett, D., Bembury, A., Credle, L., Ghandri, U., Patil, A., Yen, M.L., Jimenez, M. Conditions of confinements in Massachusetts, California and Florida during COVID-19: Individuals speak: Incarcerated during the COVID-19 epidemic (INSIDE). The 2021

Correctional Health Conference, Academic Consortium on Criminal Justice Health, Worcester, MA.

April 2021 **Cassarino, N.**, Dabbara, H., Bennett, D., Bembury, A., Credle, L., Ghandri, U., Patil, A., Yen, M.L., Jimenez, M. Individuals Speak: Incarcerated During the COVID-19 Epidemic. The 2021 Correctional Health Conference, Academic Consortium on Criminal Justice Health, Worcester, MA.

November 2020 **Cassarino, N.**, Dabbara, H., Bennett, D., Bembury, A., Credle, L., Ghandri, U., Patil, A., Yen, M.L., Jimenez, M. Individuals Speak: Incarcerated During the COVID-19 Epidemic. Presented at Discover Brigham 2020. Boston, MA.

May 2019 **Cassarino, N.** Jimenez, M.C., Rexrode, K.M., Associations between social engagement and cardiovascular disease among individuals incarcerated in state correctional facilities. Presented at the Brigham's Commitment to Equity in Healthcare Conference, Brigham and Women's Hospital, Boston, MA, 2019.

April 2019 **Cassarino, N.** Jimenez, M.C., Rexrode, K.M., Associations between social engagement and cardiovascular disease among individuals incarcerated in state correctional facilities. Presented at the New England Science Symposium, Harvard Medical School, Boston, MA, 2019.

## AWARDS/HONORS

August 2023 **MGH Mongan Institute Health Care Delivery Research Workshop Scholarship Recipient:** Awarded to several students who were accepted to attend the Mongan Institute Introduction to Health Care Delivery Research Workshop at Massachusetts General Hospital. The award covers the cost of attendance of the workshop.

June 2023 **Family Medicine Externship:** Awarded to six students from the Boston-track MD program at TUSM. I shadowed my preceptor, Dr. Leonard Finn, at Needham-Wellesley Family Medicine Practice, and assisted him with research into mindfulness-based nutrition and group visits for patients with Type 2 Diabetes. Our work was accepted for presentation at the North American Primary Care Research Group (NAPCRG) Conference in October 2023. I was awarded a \$1,000 stipend with my acceptance into the program.  
Awarded by Tufts University School of Medicine, Boston, MA

September 2022 **Induction into Sam Ho Health Justice Scholars Program**  
Awarded by Tufts University School of Medicine, Boston, MA

May 2021 **Induction into Honos Civicus Society:** Awarded for engagement in service to my community in the field of incarceration research and advocacy  
Awarded by Tufts University School of Medicine, Boston, MA

May 2021 **Delta Omega Scholarship:** Awarded to one student from Tufts University School of Medicine upon acceptance of an abstract to the American Public Health Association 2021 Academic Conference. Prize included full coverage of the cost of application to the conference, cost of airfare and housing and a \$350 award.  
Awarded by the Delta Omega Society at Tufts University School of Medicine

January 2021 **Student Scholarship:** awarded to eight applicants for submission of abstract to 14th Academic and Health Policy Conference on Correctional Health  
Awarded by the American Consortium on Criminal Justice Health, Worcester, MA

- May 2017      **Dean's List Academic Achievement Award:** awarded for graduating with a GPA above 3.7  
Awarded by Cornell University, Ithaca, NY
- May 2017      **Induction into Alpha Sigma Lambda Honor Society:** for graduating in the top 10% of class  
Awarded by Cornell University, Ithaca, NY
- March 2016      **Student Service Award:** awarded for service to my community by registering bone marrow donors  
Awarded by Cornell University, Ithaca, NY

**VOLUNTEERING:**

- March 2023 - Present      **Phoenix Project,** I volunteer to hold drop-in sessions to answer health-related questions for women incarcerated in South Bay House of Corrections in Boston, MA
- June 2020 – May 2021      **Tufts University School of Medicine,** leader of the R2C (Return to Campus) team of MPH students reviewing emergent literature on COVID-19 to inform best practices to be used by the university administration upon campus re-opening
- Jan 2020 – Mar 2020      **Boston Medical Center,** volunteer in Endoscopy Clinic [position ended early due to pandemic]
- Jan 2020 – Mar 2020      **Tufts Medical Center,** volunteer in the Emergency Dept [position ended early due to pandemic]
- May 2008 – Mar 2020      **Delete Blood Cancer,** volunteer bone marrow drive coordinator
- Aug 2012 – Jan 2015      **Big Brothers Big Sisters of Tompkins County,** mentored a pre-teen girl in Ithaca, NY
- Jan 2008 – Jan 2010      **Northern Dutchess Hospital,** volunteered transporting post-operative Med-Surg patients

**CLINICAL SHADOWING:**

- June 2023-July 2023      **Shadowed Dr. Leonard Finn,** Needham-Wellesley Family Medicine Practice [50 Hours]
- Nov 2022-Jan 2023      **Shadowed Dr. Sandra Lucio,** Department of Child and Adolescent Psychiatry at Tufts Medical Center [20 hours]
- Oct 2019 – Feb 2020      **South Boston Community Health Center,** Department of Family Medicine [48 hours]  
I shadowed Dr. Alexandra Gast, chief resident physician in the department of family medicine
- Aug 2018 – Feb 2020      **Boston Children's Hospital,** Neonatal Intensive Care Unit [42 hours]  
I shadowed Dr Monica Hsiung-Wojcik, attending physician in the NICU
- May 2009      **Vassar Brothers Hospital,** Heart and Vascular Care [12 hours]  
I shadowed Dr Louis Kantaros, a cardiothoracic surgeon, during a coronary artery blockage graft (CABG) procedure, an opportunity which I won as first prize in an essay contest on heart health

**SKILLS:**

Technical: Experienced with the following,

Programming languages: SAS, R, Stata, SPSS

Software: Qualtrics and REDCap, Microsoft Office Suite

Language: Proficient in Spanish (as demonstrated by completion of the CLEP exam)



