



## Fifth Annual World Health Continuing Medical Education Conference

# Health Disparities Impacting Global and Local Caribbean Populations

September 9-10, 2022

The Royal Sonesta New Orleans  
300 Bourbon Street  
New Orleans, LA

Provided by Healthfirst, Howard University College of Medicine, and MediNova



## FIFTH ANNUAL WORLD HEALTH CONTINUING MEDICAL EDUCATION CONFERENCE: "HEALTH DISPARITIES IMPACTING GLOBAL AND LOCAL CARIBBEAN POPULATIONS"

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### **PROGRAM OVERVIEW**

This Continuing Medical Education activity is designed to update primary care and specialty practices on the evolving strategies for implementing evidence-based medicine to meet the needs of local, regional, and global communities. The intent is to inform the attendees on innovations in treating special patient populations, with a focus on Caribbean communities. Using evidence-based prevention, chronic-disease management, pharmacotherapy, and cutting-edge treatment options, participants will be able to integrate approaches to improve care outcomes for patients.

### **PROGRAM OBJECTIVES**

At the conclusion of this activity, participants will be cognizant of:

#### **Objective 1**

New models of healthcare delivery system reform and how they can be employed

#### **Objective 2**

Current solutions to address healthcare fragmentation and health outcomes

#### **Objective 3**

Using data to define standards of care

#### **Objective 4**

Using quality measures to define value

#### **Objective 5**

Addressing health disparities of Caribbean populations both locally and abroad

### **TARGET AUDIENCE**

Medical directors, physicians, physician assistants, nurse practitioners, nurses, health professionals, and practice leaders that serve high-risk populations.

### **SPONSOR ACCREDITATION**

Howard University College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

### **CREDITS FOR PHYSICIANS**

Howard University College of Medicine Office of Continuing Medical Education designates this educational activity for a maximum of 10.25 AMA PRA Category 1 Credits™.

Day 1 | Friday, September 9, 2022 - 6.75 Credits

Day 2 | Saturday, September 10, 2022 - 3.5 Credits

Physicians should claim only credit commensurate with the extent of their participation in the activity.

## FIFTH ANNUAL WORLD HEALTH CONTINUING MEDICAL EDUCATION CONFERENCE: "HEALTH DISPARITIES IMPACTING GLOBAL AND LOCAL CARIBBEAN POPULATIONS"

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### ***CME CERTIFICATION REGISTRATION***

To receive credits, each physician must sign the attendance log and complete, sign, and return the Record of Attendance Form indicating the hours he/she actually spent in the activity.

### ***DISCLAIMER***

Howard University College of Medicine/Howard University Hospital and their staffs are not responsible for injury or illness resulting from the use of medications or modalities discussed during this educational activity.

### ***REGISTRATION***

If you need additional information or to register for the conference, please email Angela Sullivan, Healthfirst, at [ASullivan@healthfirst.org](mailto:ASullivan@healthfirst.org) or call 212-671-7303.

### ***FACULTY DISCLOSURE***

It is the policy of Howard University College of Medicine to ensure objectivity, balance, independence, transparency, and scientific rigor in all CME-sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are expected to disclose to the audience any relevant financial relationships and to assist in resolving any conflict of interest that may arise from the relationship. Presenters must also make a meaningful disclosure to the audience of their discussions of unlabeled or unapproved drugs or devices. This information will be available as part of the course materials.

### ***SPECIAL NEEDS***

Howard University College of Medicine is in full compliance with provisions of the Americans with Disabilities Act (ADA) and is accessible to individuals with special needs. If you would like to attend this conference and require any special needs or accommodations, please contact Angela Sullivan, Healthfirst, at [ASullivan@healthfirst.org](mailto:ASullivan@healthfirst.org) or call 212-671-7303.

Day 1	Friday, September 9, 2022
8:00am–8:15am	<p><b>Welcome and Introduction</b>            Shelly McDonald-Pinkett, MD, FACP  <i>Interim Chair, Department of Medicine, Howard University College of Medicine</i></p> <p>Henry R. Paul, MD  <i>President, MediNova</i></p>
<b>Lectures</b>	
8:15am–9:45am	<p><b>Borders and Boundaries: Addressing the Intersecting Needs of Displaced Persons</b>            Zahirah McNatt, DrPH, MHSA  <i>Assistant Commissioner, Bureau of Brooklyn Neighborhood Health Center for Health Equity and Community Wellness (CHECW), NYC Department of Health and Mental Hygiene</i></p> <p><b>Advancing Health Equity for Caribbean New Yorkers: Policy and Practice Implications</b>            Olusimbo K. Ige, MD, MS, MPH  <i>Assistant Commissioner, Center for Health Equity and Community Wellness (CHECW), NYC Department of Health and Mental Hygiene</i></p> <p><b>Citizenship as a Social Determinant of Health: Health Access and Utilization with Immigrant Populations</b>            Errol Pierre, MPA, DBA  <i>Assistant Professor of Health Administration, NYU Senior Vice President, State Programs, Healthfirst</i></p>
9:45am–10:30am	<b>Question and Answer Session</b>
10:30am–10:45am	<b>Break: 15 minutes</b>
10:45am–11:15am	<p><b>COVID-19 Pandemic: Racial &amp; Ethnic Disparities in Treatment, Hospitalization &amp; Deaths</b>            Amos Charles, MD  <i>Clinical Associate Professor of Medicine, Warren Alpert Medical School of Brown University</i></p>
11:15am-11:30am	<b>Question and Answer Session</b>
11:30am-12:30pm	<b>Lunch: 60 Minutes</b>



12:30pm-2:00pm	<p><b>Health Disparities in Cancer Care: The Caribbean Population</b> Kristina Gowin, DO <i>Assistant Professor of Medicine, University of Arizona</i></p> <p><b>Post-acute “Long” COVID-19 Syndrome: Risk Factors, Mechanisms and Mitigations in Minority Populations</b> Celia J. Maxwell, MD, FACP, FIDSA <i>Associate Dean for Research &amp; Professor of Medicine Howard University College of Medicine</i></p> <p><b>The Consequences of Policy: Access to Kidney Transplantation</b> Devon G. John, MD, FACS <i>Chief of Renal Transplantation, Westchester Medical Center/ New York Medical College</i></p>
2:00pm-2:45pm	<b>Question and Answer Session</b>
2:45pm-3:00pm	<b>Break: 15 minutes</b>
3:00pm-4:00pm	<p><b>Opioid Management within the General and Caribbean Populations</b> Georges Casimir, MD <i>Clinical Assistant Professor, SUNY Downstate Health Science University</i></p> <p>Janelle Harrison, DMSc, MBA, PA-C <i>Assistant Professor, Mercy College Health and Natural Science Program</i></p> <p><b>Physician Wellness and Its Impacts on the Caribbean Population</b> Kelechi C. Fluitt, PhD <i>Director of Outreach, Howard University Counseling Service</i></p>
4:00pm-4:30pm	<b>Question and Answer Session</b>
<b>Dismiss Session</b>	

Day 2	Saturday, September 10, 2022
8:30am–8:45am	<p><b>Welcome and Introduction</b>            Shelly McDonald-Pinkett, MD, FACP  <i>Interim Chair, Department of Medicine, Howard University College of Medicine</i></p> <p>Henry R. Paul, MD  <i>President, MediNova</i></p>
<b>Lectures</b>	
8:45am–9:45am	<p><b>Radiology Capacity Development            The Age of Point of Care Ultrasound</b>            Berndt Schmit, MD, MBOE  <i>Associate Professor of Radiology, Director of Radiology Operations &amp; Business Development, George Washington University</i></p>
9:45am–10:00am	<b>Question and Answer Session</b>
10:00am–10:15am	<b>Break: 15 minutes</b>
10:15am–11:45am	<p><b>Population Health as it Relates to Quality and Cost:            Implications in Health Disparities and Men’s Health</b>            Moro Salifu, MD, MPH, MBA, MACP  <i>Chairman, Department of Medicine, SUNY Downstate Health Sciences University</i></p> <p><b>Women’s Health: Disparities in the Caribbean Population            Locally and Globally</b>            Ambereen Sleemi, MD, MPH, FPMRS, FACOG  <i>Executive Director and Surgical Director, International Medical Response</i></p> <p><b>Telementoring: A Mechanism to Reduce Health Disparities in            Children (and Beyond)</b>            Steve Caddle, MD, MPH, FAAP  <i>Associate Professor of Pediatrics, Columbia University Irving Medical Center</i></p>
11:45am–12:30pm	<b>Question and Answer Session</b>
<p><b>Closing Remarks/Adjourn</b>            Henry R. Paul, MD  <i>President, MediNova</i></p>	

# Zahirah McNatt, DrPH, MHSA



## Assistant Commissioner, Bureau of Brooklyn Neighborhood Health Center for Health Equity and Community Wellness, NYC Department of Health and Mental Hygiene

Dr. Zahirah McNatt is the Assistant Commissioner for the Bureau of Brooklyn Neighborhood Health. Dr. McNatt oversees and manages the successful development, implementation, and evaluation of community-level and systems-level strategies in North and Central Brooklyn that aim to address health inequities. She also leads the Bureau's programming, planning, and recovery work to address racial and other social inequities resulting in premature mortality, including for neighborhoods disproportionately impacted by COVID-19 due to histories of systemic and structural inequities driven by racism and oppression.

Dr. McNatt's expertise lies at the intersection of global public health, humanitarian systems, and human rights. She has more than 15 years of experience in the Americas, the Middle East, East Africa, and Southeast Asia. Her work has spanned academic, non-profit, and government sectors. Prior to her role at the Health Department, Dr. McNatt served as the Godley-St. Goar Chair of the Department of Community Health and Social Medicine and Assistant Professor at the University of Global Health Equity. Dr. McNatt also served as the Director for Leadership, Education and Practice at the Yale Global Health Leadership Institute. In these and other roles, Dr. McNatt has launched national programs to improve hospital quality in low- and high-income countries, fostered effective partnerships with community-based organizations, schools, and health centers, and conducted research on governance and accountability in health.

She has also championed health service improvements for refugee communities and centered efforts to improve prevention and treatment for noncommunicable diseases and mental disorders. Dr. McNatt earned her doctorate from Columbia University, Mailman School of Public Health and her master's in health services administration from the University of Michigan, School of Public Health.



# Olusimbo K. Ige, MD, MS, MPH



## Assistant Commissioner, Center for Health Equity and Community Wellness, NYC Department of Health and Mental Hygiene

Dr. Olusimbo Ige serves as the Assistant Commissioner at the Center for Health Equity and Community Wellness (CHECW), guiding the division's health equity programs and serving as a key advisor to the City's Executive Leaders. As Branch Chief for the COVID-19 Vaccine Equity Program, she helped design and launch the Public Health Corps Initiative, a partnership with more than 80 community-based organizations, that led to a 93% COVID vaccine uptake in NYC Public Housing Residents. She is the Chair of the vaccine committee of the Mayoral Taskforce for Racial Inclusion and Equity. She also chairs the Health Equity and Social Justice Taskforce of the National Association of County and City Health Officials (NACCHO). For more than 16 years she has successfully led diverse, multicultural teams and multinational programs to address health inequities in several countries.

In 2018, Dr. Ige led the United Nations Every Woman, Every Child program to reach one million children with lifesaving interventions in seven low-income countries. In 2015 she was awarded the Malaria Superhero Cape by the Global Health Fund in Geneva for her leadership of the Imagine No Malaria Program, which reached more than five million children. From 2014 to 2020 she served as Executive Director of Global Health for Global Ministries, overseeing 300 rural hospitals in 42 countries. From 2011 to 2014 she served as the USAID/MAPS capability building officer, working with governments in sub-Saharan Africa to reduce under-5 mortality. She has also served as a consultant to different multilateral agencies, including WHO, UNICEF, and USAID. Dr. Ige is a public health doctor, with graduate degrees in Epidemiology, Biostatistics, and Public Health.



# Errol Pierre, MPA, DBA



## Assistant Professor of Health Administration, NYU Senior Vice President, State Programs, Healthfirst

Errol Pierre is the Senior Vice President of State Programs at Healthfirst, the largest non-profit health plan in New York State, serving 1.8 million members. In this role, he is accountable for growth, profit/loss, sales and retention for the Medicaid, Long-Term Care, and Commercial product portfolios. Prior to Healthfirst, Errol spent more than 10 years at Empire BlueCross BlueShield, which is the largest for-profit health plan in New York State, serving close to five million members. Throughout his tenure, he held various leadership roles in Sales and Strategy, leaving the company as the Chief Operating Officer in 2019.

A Bronx, New York resident, Errol graduated from Fordham University with a bachelor's degree in Business Administration and obtained a master's degree in Health Policy and Financial Management from New York University. In December 2021, Errol completed his doctoral degree focused on Health Equity. Lastly, he is an adjunct professor at New York University, Columbia University, and Baruch College, teaching various courses in Healthcare and Business. In his spare time, Errol volunteers for numerous non-profit organizations as a board member of the Arthur Ashe Institute of Urban Health, and is member of the national 100 Black Men's Health & Wellness Committee.

In 2020, he was acknowledged as one of the Caribbean-American "Power 100" by Carib News and was awarded for "Outstanding Community Service" by the Aesclepius Medical Society. In 2018, he was recognized for with the Outstanding & Dedicated Service Award by 100 Black Men and the Home Award by the National Organization for the Advancement of Haitians.

Errol is also the author of the newly released book, *The Way Up – Climbing the Corporate Mountain as a Professional of Color*, published by Wiley in 2022.





# Amos Charles, MD



## Clinical Associate Professor of Medicine, Warren Alpert Medical School of Brown University

Dr. Charles is a Clinical Associate Professor of Medicine at the Alpert Medical School of Brown University in Providence, RI. He is a Pulmonologist/Critical Care Specialist by training. He is currently the Chief of the Hospitalist Division of the Department of Medicine at the Providence VA Medical Center (PVAMC). Dr. Charles has been at the PVAMC since 1992. Dr. Charles earned his Bachelor of Science Degree in Biology from the City College of the City University of New York (CUNY). He received his Medical Degree from Ross University School of Medicine (Portsmouth, Dominica). After medical school, Dr. Charles worked for three years as a Pulmonary Research Associate at the Pulmonary Center, Boston University School of Medicine. He completed a Medicine Residency Training at the Robert Wood Johnson Residency Program in Neptune, New Jersey, and a Pulmonary Critical Care training at Brown University Pulmonary/Critical Care Fellowship training program in Providence, RI. He has stayed in Rhode Island and has been working at the Providence, VA since he completed his fellowship training.

Dr. Charles filled several roles during his tenure at the PVAMC. He has been the Medicine Clerkship site Director for the past 15 years. He previously served as the Medicine Residency Program Director for several years. For 15 years, he has been the co-leader of the Brown University Residency Global Health Exchange Program with Haiti and the Dominican Republic. Dr. Charles also participated in the Brown University Pulmonary Fellowship training in Addis Ababa, Ethiopia. Dr. Charles has participated in several mobile clinics that he organized himself and with others providing medical care in underserved areas in Haiti and other places with limited resources. Dr. Charles expresses joy teaching residents and medical students alike.

He has received more than 50 awards/honors for his role as a Medical Educator. His hobbies include traveling and running, trail walking, hiking, and amateur photography. Dr. Charles is a staunch patient advocate. He believes that delivery of care by healthcare providers should be unbiased and equitable.



# Kristina L. Gowin, DO



## Assistant Professor of Medicine, University of Arizona

Dr. Kristina Gowin is a Hematologist Oncologist and Assistant Professor of Medicine in the Department of Bone Marrow Transplant and Cellular Therapies at University of Arizona Cancer Center, with focus on Multiple Myeloma and integrative oncology. Dr. Gowin graduated from Chicago College of Osteopathic Medicine in 2009, where she received a merit scholarship and recognition from the American Women's Medical Association for outstanding academic achievement. She completed her internal medicine residency at University of Southern California. She then received her hematology and medical oncology training at Mayo Clinic in Arizona and later completed her fellowship training in integrative medicine at the University of Arizona.

She is an active clinical researcher and serves as primary investigator on several ongoing clinical trials. She has published in many peer-reviewed journals and has authored a book on cancer patient wellness. Dr. Gowin's research interest includes myeloma clinical trials, meditative movement, and dietary interventions to support hematologic cancer patients. She has a deep passion for global and rural healthcare delivery with experience directing a clinic for the homeless of Chicago, healthcare outreach in Los Angeles, Hurricane Katrina Medical Relief, and medical missions to Costa Rica and Nicaragua.



# Celia J. Maxwell, MD, FACP, FIDSA



## Associate Dean for Research & Professor of Medicine, Howard University College of Medicine

Dr. Celia Maxwell is the Associate Dean for Research at Howard University College of Medicine. Currently, she is also the Principal Investigator for The Ryan White Part C EIS as well as the Routine HIV Screening Programs. Additionally, Dr. Maxwell was selected by Sharon Pratt-Kelly, former Mayor of Washington, D.C., to co-chair the Transitional Task Force on AIDS services, and was also appointed to the Healthcare Reform Task Force chaired by First Lady Hillary Clinton.

She was also selected for the nationally renowned Robert Wood Johnson Health Policy Fellowship, and through the fellowship she served as a health legislative assistant for Senator Tom Harkin (D. Iowa). In 2015 she was appointed as a member of the Scientific Advisory Board of the US President's Emergency Plan for Aids Relief (PEPFAR).



# Devon G. John, MD, FACS



## Chief of Renal Transplantation, Westchester Medical Center / New York Medical College

Dr. Devon John is the Chief of Renal Transplantation at Westchester Medical Center (WMC) and joined WMC in 2019. Prior to joining WMC, Dr. John served as the Interim Chair of Surgery and the Chief of Transplantation at The State University of New York, Downstate Medical Center. He attended Princeton University and The Mount Sinai School of Medicine. He completed his Residency at the State University of New York, Health Science Center at Brooklyn. Dr. John was a Transplant Fellow at New York University Medical Center as well as a Surgical Research Fellow at The State University of New York.



# Georges Casimir, MD



## Clinical Assistant Professor, SUNY Downstate Health Sciences University

Dr. Casimir is currently Clinical Assistant Professor of Psychiatry, and formerly the Associate Director of the Geriatric Psychiatry Division and the Geriatric Psychiatry Fellowship Training Program at SUNY Downstate Medical Center. In 2002, he was appointed Vice-President of Medical Affairs and Medical Director of Kingsbrook Jewish Medical Center, a position he held until 2004.

Dr. Casimir is a Diplomate of the American Board of Psychiatry and Neurology with added certifications in Geriatric Psychiatry, Addiction Psychiatry, and Forensic Psychiatry. He is also board certified by the American Society of Addiction Medicine and the American Society of Clinical Psychopharmacology.

Dr. Casimir has received research and training funding for over eight million dollars from many national agencies such as the National Institute of Mental Health (NIMH), the National Institute of Aging (NIA), etc. He has coauthored several book chapters and published more than fifty peer-reviewed articles. His clinical presentations and professional activities have received wide publicity in many local and national news organizations, including the New York Daily News, the New York Post, Amsterdam News, Clinical Psychiatry News, Miami Herald, and the Boston Globe.





# Janelle Harrison, DMSc, MBA, PA-C



## Assistant Professor, Mercy College Health and Natural Science Program

Dr. Harrison is an Assistant Professor for the graduate program in Physician Assistant Studies at Mercy College. She has more than 10 years of experience in clinical medicine, working in underserved communities in New York. She has experience in various specialties, including general surgery, critical care, psychiatry, and addiction medicine.

She is passionate about humanitarian work and continues to make a difference in the local and global health communities. The experiences gained during mission trips has helped Dr. Harrison grow and develop a greater love for humanity as she assists in saving lives, relieving suffering, and maintaining human dignity.



# Kelechi C. Fluitt, PhD



## Director of Outreach, Howard University Counseling Service

Dr. Kelechi C. Fluitt (formerly Anyanwu) currently serves as the Director of Outreach and is a clinical staff member at the Howard University Counseling Service. She is a clinician, educator, researcher, and moderator who specializes in group psychotherapy, diversity training, leadership training, and working within university and college settings. She has specialized focus on issues related to HBCU student success, self-efficacy, leadership efficacy, imposter syndrome, religious coping, and grief.

Dr. Fluitt received her PhD in Counseling Psychology from Howard University. She completed her American Psychological Association Accredited Internship at the Howard University Counseling Service. Dr. Fluitt has diverse clinical training experiences, including the Veterans Administration, DC Superior Court, University and Community colleges. She completed a two-year fellowship at the Washington School of Psychiatry National Group Psychotherapy Institute in Washington, DC. She is a member of the American Psychological Association, American Group Psychotherapy Association, and Mid Atlantic Group Psychotherapy Association, where she serves as a member of the board in the position of Director of Training. She is also a lifetime member of Psi Chi International Honor Society. Dr. Fluitt is married to Dr. Maurice B. Fluitt and they are the proud parents of four children.



# Berndt Schmit, MD, MBOE



## Associate Professor of Radiology, Director of Radiology Operations & Business Development, George Washington University

Berndt Schmit, MD, MBOE, is a Clinical Associate Professor in the Department of Medical Imaging at the University of Arizona Banner Medical Center, serving as the founding Chief of Emergency Radiology. Dr. Schmit will be relocating to George Washington University in Washington, DC, where he will serve as Director of Radiology Operations and Business Development, as well as International Radiology Development starting July 2022.

Dr. Schmit has been a practicing radiologist for 24 years. He received his medical degree from Tufts University School of Medicine (Boston, MA) in 1991. He studied Emergency Medicine at the University of Arizona, then completed his diagnostic radiology residency (Mount Auburn Hospital, Cambridge, MA), followed by his Fellowship in Musculoskeletal Imaging (Brigham & Women's Hospital, Boston, MA) in 1998. Dr. Schmit co-authored the textbook *Bone and Soft Tissue Tumors; a Multidisciplinary Review with Case Presentations*, published in 2014.

Dr. Schmit enjoys entrepreneurship and won USA Patents # 6,684,096 and 6,882,878 for an MRI positioning device. He is an advisor for Emagine Solutions Technology; a start-up healthcare technology company based in Arizona which has brought the FDA-approved VistaScan handheld ultrasound to market, as well as The Journey, a mobile device personal health application for pregnant women.

Dr. Schmit believes in cultures that create engagement and empowerment, and thus pursued the unique Master of Business Operational Excellence degree at Ohio State University which focuses on the principles of Lean Management in the Healthcare setting in 2014. Dr. Schmit is a consultant with Radiology Business Solutions, which helps radiology private practices across the country. Dr. Schmit loves to teach and has been honored with multiple teaching awards from medical students and radiology residents.

Dr. Schmit started his global health journey as a medical student in a public hospital in rural Guatemala. After several years of leadership experience in a large radiology non-profit, Dr. Schmit founded Humanitarian Radiology Development Corporation (HRD Corps) in 2017 to better focus on building actual radiology capacity.

HRD Corps is a 501c3 medical charity ([www.hrdcorps.org](http://www.hrdcorps.org)) whose mission is to build self-sustaining capacity development in healthcare in poor regions of the world through their expertise and resources in radiology. HRD Corps members are all strictly volunteers. HRD Corps prides itself on addressing the full value stream of healthcare services for its projects in Malawi, Mexico, Bolivia, Haiti, and Nicaragua. To date, HRD Corps has implemented \$1.6m of donated imaging equipment, started an ultrasound training program, and given countless lectures and symposiums.

Dr. Schmit is an outdoor enthusiast, photographer, and classical pianist. He is a multiengine instrument-rated pilot and enjoys flying dog rescue missions for Pilots N Paws. His wife is an academic oncologist, and they are blessed with three wonderful children.



# Moro O. Salifu, MD, MPH, MBA, MACP



## Chairman, Department of Medicine, SUNY Downstate Health Sciences University

Dr. Moro Salifu is a tenured Professor of Medicine and Chairman of the Department of Medicine at State University of New York, Downstate Medical Center, Brooklyn. He is also the Edwin C. and Anne K. Weiskopf Endowed Chair in Nephrology and Transplantation. For his exemplary contributions in science and in leadership, Dr. Salifu was recognized as Master of the American College of Physicians in 2018 in the Annual ACP Convocation ceremony in New Orleans.

Following completion of medical school in Turkey, Dr. Salifu came to Downstate for his residency and never left. He completed fellowships in nephrology and transplant nephrology at Downstate and interventional nephrology fellowship at Emory University, following which he joined the faculty at Downstate. While a resident and fellow at Downstate, Dr. Salifu won six house staff research abstract competition awards and was a three-time finalist at the NYACP Associate Poster competitions.

Dr. Salifu is known for his outstanding research, and clinical and administrative skills. He has two additional master's-level degrees, one in public health, from Downstate, and the other in business administration, from the George Washington University. He is highly respected within SUNY Downstate as well as in the national and international nephrology community. He is a productive investigator whose research interests include vascular biology, chronic kidney disease progression, and kidney transplant outcomes. His work in vascular biology has resulted in the discovery of peptides inhibitors of the F11 receptor on platelets, endothelial and smooth muscle cells and now holds a patent on inhibitors of F11 receptor, with therapeutic implications for the treatment of thrombosis, atherosclerosis, and smooth muscle disorders such as pulmonary hypertension and dialysis vascular access dysfunction.

He is the recipient of numerous grants, including being the principal investigator of a multi-million dollar award from the National Institutes of Health to advance the work of the Brooklyn Health Disparities Center. The Brooklyn Health Disparities Center is a community-academic-government partnership to reduce health disparities through innovative community engaged research and education.

Dr. Salifu is the recipient of numerous awards, including best educator of the year, Best Doctor US News and World Report, Castle Connelly Top Doctor, Worldwide Registry of Executives and Professionals, Kings of Kings County, just to name a few. He has published extensively in peer-reviewed journals nationally and internationally. He is also a member and journal reviewer for nephrology and transplant societies and has served on many local and national professional committees. He is the past president of the New York Society of Nephrology for the 2013-14 academic year.



# Ambereen Sleemi, MD, MPH, FPMRS, FACOG



## Executive Director and Surgical Director, International Medical Response

Ambereen is a female pelvic medicine reconstructive surgeon (Urogynecologist) and trained obstetric fistula surgeon. She has served as an obstetric fistula surgeon for the Eritrean Women's Project in Mendefera, Eritrea, since 2007, and as a surgical team co-leader for Medicine In Action's spring trip to Kingston, Jamaica, as well as on the medical board. She spent six years on the executive committee of the International Society for Obstetric Fistula Surgeons (ISOFS) and is still an active member. In January 2013, she developed the Haitian Women's Health Collaborative in partnership with the Department of Ob/Gyn at the National Hospital in Port-au-Prince, Haiti. This project has expanded to a partnership with St. Boniface Hospital in the southern part of the country, continuing our pledge to increase safe surgical capacity in Haiti.

She holds an MD/MPH from George Washington University School of Medicine and is currently pursuing her M.S. in Epidemiology at Columbia University's Mailman School of Public Health. She trained in Ob/Gyn at Louisiana State University in New Orleans, LA, in Female Pelvic Medicine and Reconstructive Surgery at Maimonides Medical Center, and in obstetric fistula surgery in northern Nigeria.





# Steve Caddle, MD, MPH, FAAP



## Associate Professor of Pediatrics, Columbia University Irving Medical Center

Steve Caddle is an Associate Professor of Pediatrics in the Division of Child and Adolescent Health at Columbia University Irving Medical Center. He sees patients in primary care and teaches residents and students in the Ambulatory Care Network of NewYork-Presbyterian Hospital (NYPH). Dr. Caddle is a faculty member at the Columbia University Vagelos College of Physicians & Surgeons (VP&S) and is the Director of Pediatric Electives and Sub-internships, as well as the Pediatric Lead for VP&S MD/PhD students' clinical immersion during their research years.

Dr. Caddle completed a pediatric residency and chief resident year at the Childrens Hospital at Montefiore, in the Bronx. Prior to that, he obtained his medical degree from the Albert Einstein College of Medicine, and later, a Master of Public Health degree from the Columbia University Mailman School of Public Health.

Dr. Caddle's academic interests include quality improvement and emerging infectious diseases. He was part of the preparedness team for Ebola virus at NYPH, and he has worked with the American Academy of Pediatrics around telementoring during the Zika virus epidemic and the COVID-19 pandemic. Over the past decade, he has worked with MediNova, Howard University College of Medicine, and Healthfirst, on clinical and education efforts in Haiti.





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Jointly Provided by Healthfirst, Howard University College of Medicine, and MediNova

## ACCREDITATION STATEMENTS

### CME Accreditation

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### Credit Designation

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Day 1 | Friday September 9, 2022 – 6.75 Credits

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## CONFLICT OF INTEREST STATEMENT

It is the policy of Howard University College of Medicine to ensure objectivity, balance, independence, transparency, and scientific rigor in all CME-sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are expected to disclose to the audience any relevant financial relationships and to assist in resolving any conflict of interest that may arise from the relationship. Presenters must also make a meaningful disclosure to the audience of their discussions of unlabeled or unapproved drugs or devices. This information will be available as part of the course materials.

\*The ACCME considers financial relationships to create actual conflicts of interest in CME when individuals have both a financial relationship with a commercial interest and the opportunity to affect the content of CME about the products or services of that commercial interest. The ACCME considers "content of CME about the products or services of that commercial interest" to include content about specific agents/devices, but not necessarily about the class of agents/devices, and not necessarily content about the whole disease class in which those agents/devices are used.

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## DISCLOSURES

The following course directors and planning committee members reported no conflict of interest in the last 24 months:

### **Course Directors**

- Susan J. Beane, MD, FACP
- Shelly McDonald-Pinkett, MD, FACP
- Henry R. Paul, MD

### **Planning Committee**

- Sonseeahray Adams
- Walter P. Bland, MD, LFAPA
- Melisa Damcevaska, MPH, CHES
- Elizabeth Jean-Jacques, MPA
- Jennifer Scott
- Angela Sullivan, MPH
- Raymond Thornhill

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## DISCLOSURES

The following faculty reported no conflict of interest in the last 24 months:

- Steve Caddle, MD, MPH, FAAP
- Georges J. Casimir, MD
- Amos Charles, MD
- Kelechi C. Fluitt, PhD
- Kristina Gowin, DO
- Janelle Harrison, DMSc, MBA, PA-C
- Olusimbo Ige, MD, MPH, Msc
- Devon G. John, MD
- Celia J. Maxwell, MD, FACP, FIDSA
- Zahirah McNatt, MHSA, DrPH
- Errol L. Pierre, MPA, DBA

## DISCLOSURES

The following faculty has disclosed that they had financial relationships with ineligible entities in the past 24 months:

- Berndt P. Schmit, MD, MBOE, is an advisor for Emagine Solutions Technology which makes VistaScan.
- Moro O. Salifu, MD, MPH, MBA, MACP, is involved with several NIH studies, is an Endowed Chair in Nephrology, and a member of the SUNY Health Network of Excellence. He has a US patent for F11 Receptor antagonists (peptide 4D) as therapeutic agents in vascular disorders.

They have attested that their presentations will be objective, fair balance and without commercial bias.



# Evaluation

## **Your feedback is very important to us!**

Please complete both your evaluation and attendance form at the end of the activity in order to obtain credits for the conference.

Howard University College of Medicine has designated **10.25 AMA PRA Category 1 Credits™** for this live activity.





# Boundaries and borders

Addressing the intersecting needs of displaced persons

Zahirah McNatt, DrPH, MHSA  
September 9, 2022



## Purpose and Objectives

### PURPOSE

*To explore the public health and health service needs of displaced populations*

### OBJECTIVES

- Provide context for global and regional migration and displacement
- Highlight policies and practices that serve displaced persons and whole communities
- Advocate for better integration across public health and healthcare

### FINANCIAL DISCLOSURE

*None*



## Agenda

1. Migration: the current context
2. Health of populations on the move
3. Addressing the needs of displaced persons
4. Key takeaways





## Global numbers

- 281 million people are **international migrants**
  - India, Mexico, Russia, China, Bangladesh
- 100 million are forcibly displaced both within a country or across an international border
  - **36 million are refugees and asylum seekers:** war, persecution, human rights abuses, events seriously disturbing public order
  - Syria, Venezuela, Afghanistan, South Sudan, Myanmar
- International Organization for Migration (IOM), United Nations High Commissioner for Refugees (UNHCR), United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

5

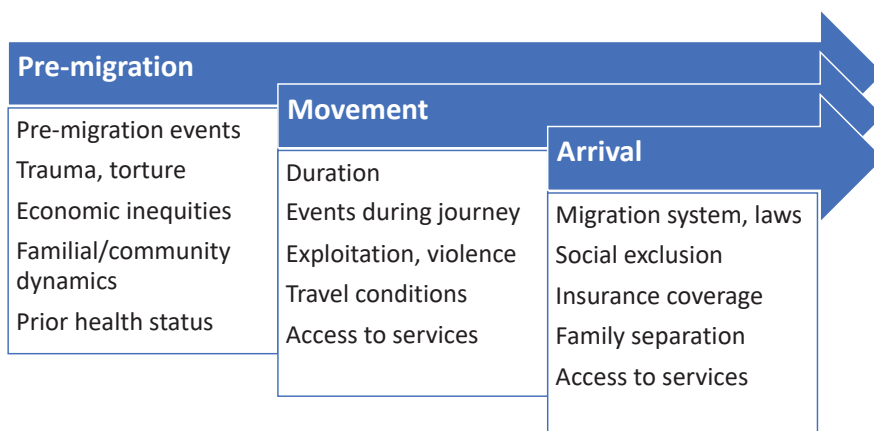
## From the Caribbean to the United States

- In 2019, 4.5 million Caribbean immigrants resided in the USA
- Majority from Cuba, Haiti, Dominican Republic, Jamaica
- Natural disasters, violence, economics, political instability
- Increased attention to climate change and extreme weather events
- Note: In recent years, largest migration > 5 million migrants and refugees from Venezuela into neighboring countries
- Populations of great concern in 2022: Haiti, Honduras, Venezuela

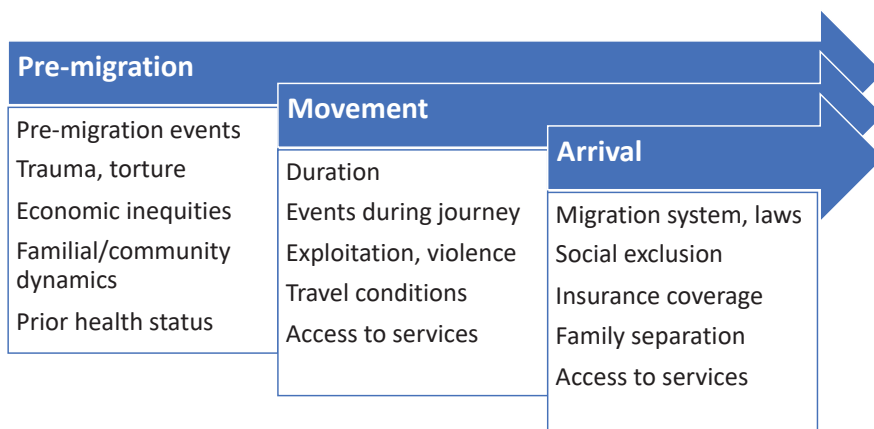




## Health of populations on the move



## Health of populations on the move







“We are living in sorrow. Can you see this [pointing to her teeth]? How can I fix them...? My tooth and face were swollen, and I went to them... I went to the doctor, and he gave me a paper with an appointment after 2 months to treat my tooth... He should have given me medicine or treatment; he wanted me to wait 2 months to pull it out or fill it... How can I wait with a swollen tooth without treatment, and so I did not go back to them and did not want to treat it, let them all fall [out]... *How would I feel? What to feel other than despair and regret for the life we lost and fear of what is coming?*”



“When I left the country there was no other way. [My husband] told me to go to ---. At first, I refused. My daughters are young, and the trip was hard, and people get injured, as there are troubles on the road. I didn’t want to leave. We stayed having this discussion for two and a half years.

Until one day we were sitting, and we were bombed.

We made the decision to leave. The house was destroyed. My parents-in-law told me to go, and they will stay and will accept their fate. We went on the road and became hungry.

*Everything happened to us on the road.”*



How do we address the needs of displaced persons?

## Approaches

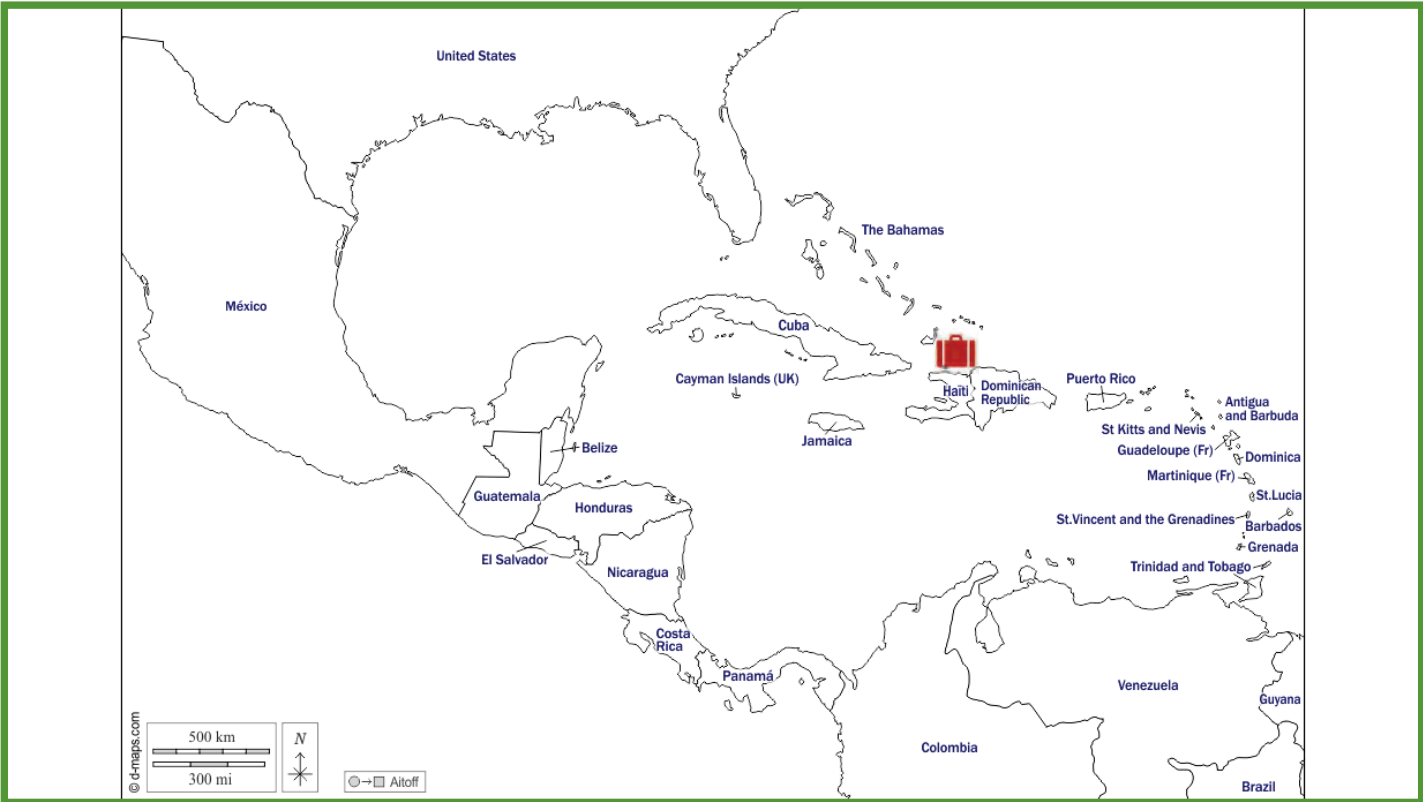
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1. Recognize displacement as a determinant of health
2. Improve the integration of physical and mental health
3. Coordinate health and social services
4. Build on the power of social connection
5. Commit to universal health coverage





# 1. Recognize displacement as a determinant







2. Integrate physical and mental health



## Bidi Bidi Refugee Settlement

Yumbe, Uganda

- Greater than 270,000 refugees from South Sudan
- International Rescue Committee provides mental health services integrated into primary care
  - Self Help Plus (SH+)
    - Audio recorded sessions
    - Self-help efforts in group settings
    - Reduce psychological distress, improve functioning
    - Referral pathways to specialized services
- Countering narrative that mental health services are too difficult to provide in crises contexts

3. Coordinate health & social services



## Action Centers

New York, USA

- Community sites dedicated to **health and social services** supports
- Harlem, Bronx, **Brooklyn**: serving diverse communities inclusive of immigrants, refugees
- Public health & health care
  - Primary care, OBGYN, pediatrics, dental
  - Chronic diseases, maternal, mental health
- Social services & supports
  - ID cards, cribs & **car seats**, art workshops, substance use disorder supports
  - Labor and birth courses, referrals for **housing and food** supports



## 4. Build on social connections



## Peer Community Health Workers

Aida Refugee Camp, Occupied Palestinian Territories

- Trusted **lay, peer** health workers
- Preventive, promotive, curative
- Friends, family, community
- Diabetes and hypertension monitoring, mental health
- **“Accompaniment”**
  - Home visiting
  - “Walking with” community
  - CHW effectiveness
- Serving refugees in 2 camps



5. Commit to universal health coverage inclusive of displaced persons

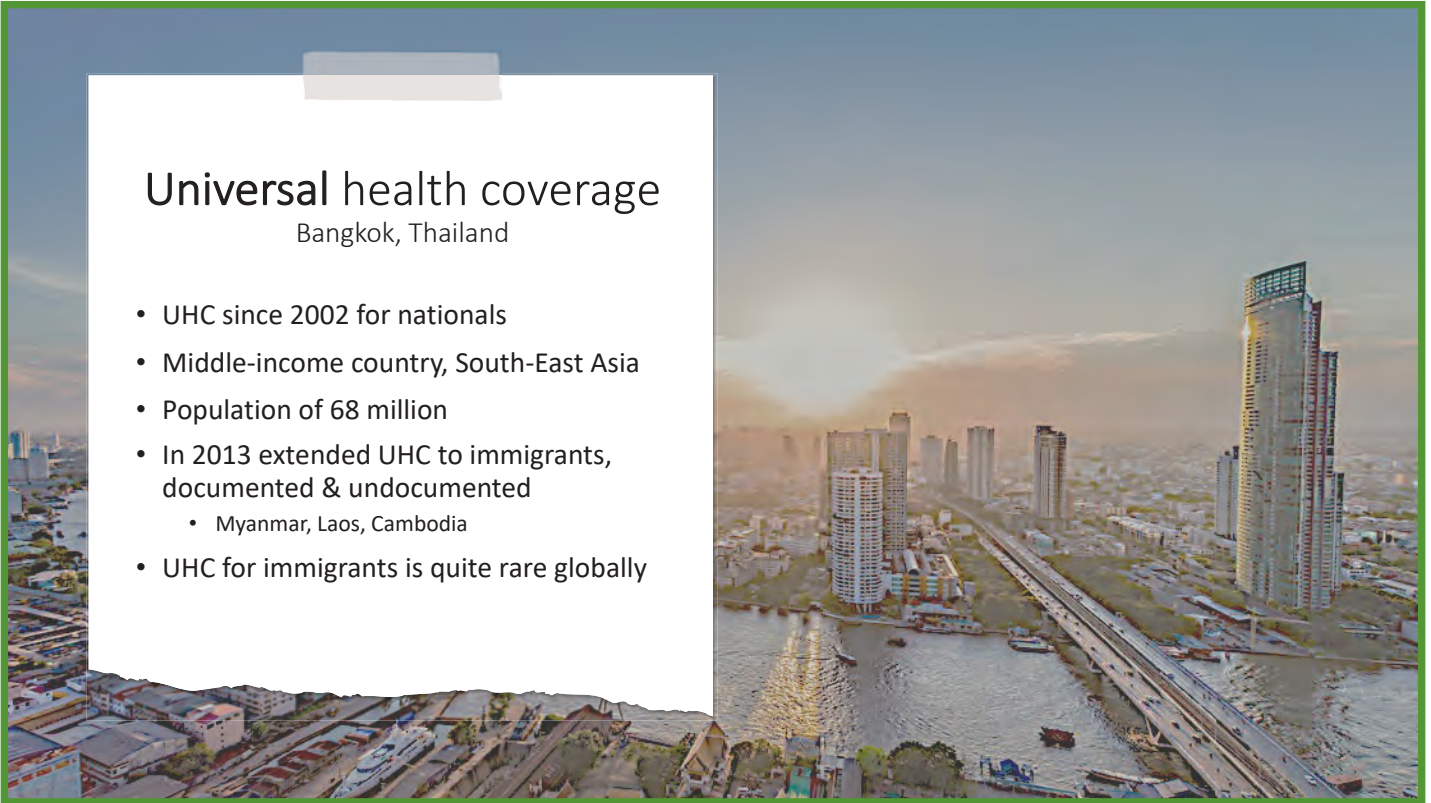




## Universal health coverage

Bangkok, Thailand

- UHC since 2002 for nationals
- Middle-income country, South-East Asia
- Population of 68 million
- In 2013 extended UHC to immigrants, documented & undocumented
  - Myanmar, Laos, Cambodia
- UHC for immigrants is quite rare globally



## Approaches

1. Recognize displacement as a determinant of health
2. Improve the integration of physical and mental health
3. Coordinate health and social services
4. Build on the power of social connection
5. Commit to universal health coverage





## Key takeaways

1. Migration remains on the rise
2. Displaced persons begin journeys in good health
3. Displacement is a determinant of health
4. Opportunity exists to center the health and social needs of those who migrate
5. Improvements for displaced persons will improve outcomes for all

## Contact Information

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Center for Health Equity and Community Wellness  
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## References

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**Thank you**

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# Advancing Health Equity for Caribbean New Yorkers: Policy and Practice Implications

Olusimbo Ige MD, MS, MPH  
Assistant Commissioner  
Center for Health Equity and Community Wellness  
NYC Department of Health  
September 2022



## Purpose and Objectives

### PURPOSE

Helping students develop competencies to advance health equity

### OBJECTIVES

- Objective 1: Understand the root causes of health inequities
- Objective 2: Review of health equity best practices

### FINANCIAL DISCLOSURE

*None*



## NYC Department of Health and Mental Hygiene

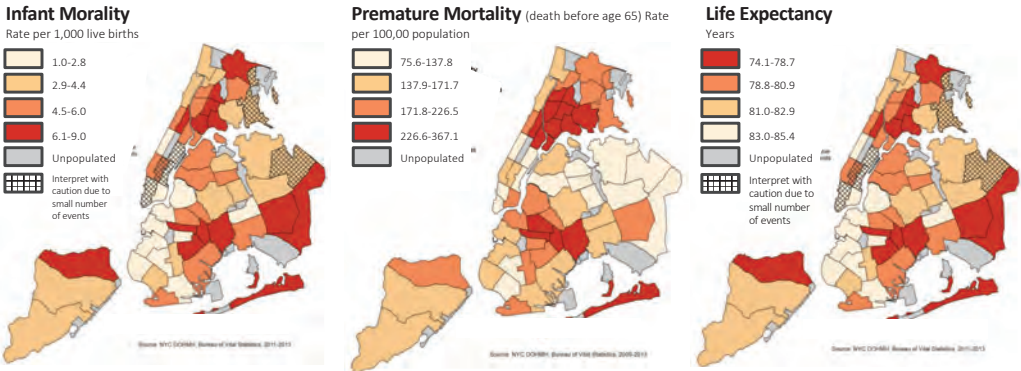
- DOHMH is one of the nation's oldest public health agencies, with more than 200 years of leadership in the field.
- With more than 7,000 employees, the Department is one of the largest public health agencies in the world.
- Every day, DOHMH protects and promotes the health of over 8.5 million New Yorkers.
- Health equity is central to the Department's work which is why racial justice is a priority.
- DOHMH is tackling these issues with innovative policies and programs and getting exceptional results.



Health Inequities in NYC |  
Before COVID

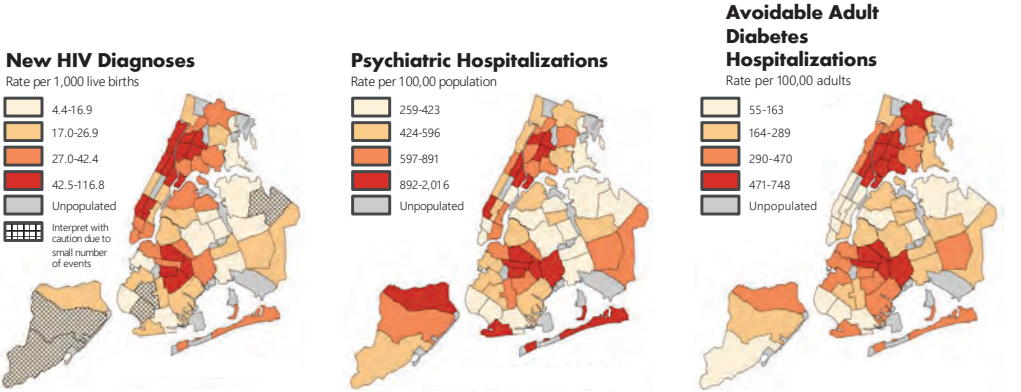


# Who dies too early? Inequities in Premature Mortality



Source: NYC Dept. Health: Community Health Profiles — 2018 Atlas

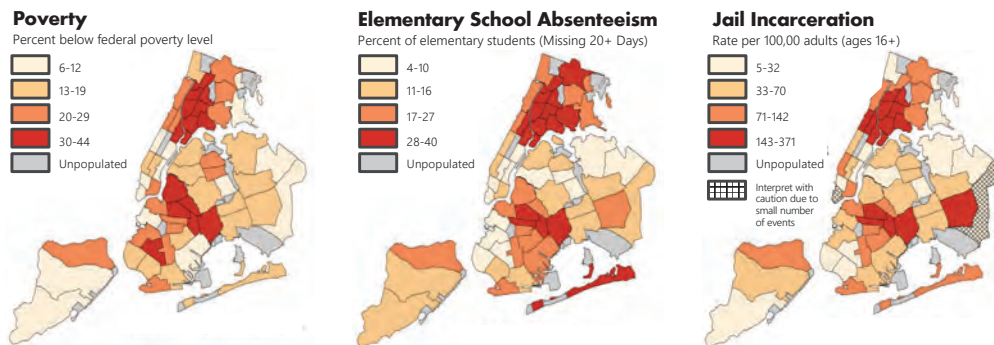
# Who gets sick at higher rates? Inequities in morbidity



Source: NYC Dept. Health: Community Health Profiles — 2018 Atlas

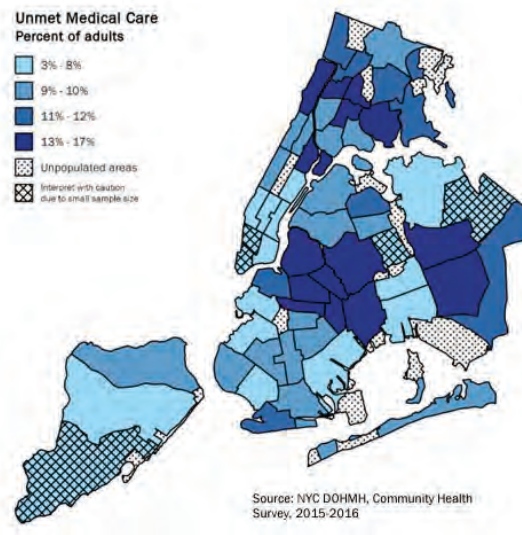


## Who gets less social support? Inequities in social determinants of health



Source: NYC Dept. Health: Community Health Profiles — 2018 Atlas

## Who gets less health care? Health care inequities

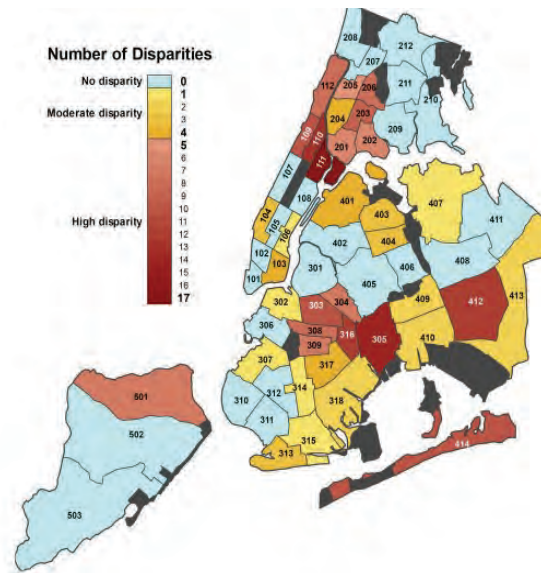


Source: NYC Dept. Health: Community Health Profiles — 2018 Atlas





# Overwhelming Burden of Health Disparities

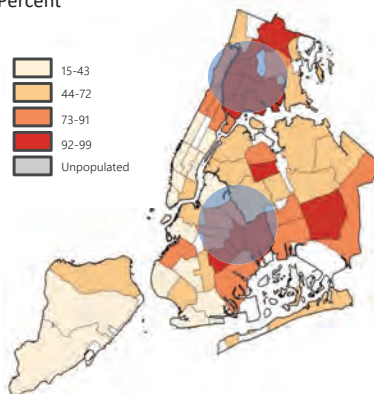


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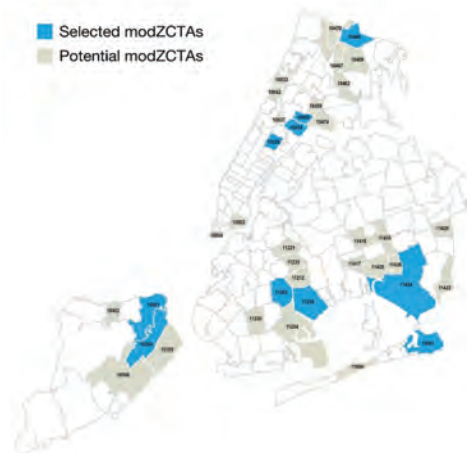
- Kang JX, Levanon Seligson A, Dragan KL. Identifying New York City Neighborhoods at Risk of Being Overlooked for Interventions. *Prev Chronic Dis* 2020;17:190325. DOI: <http://dx.doi.org/10.5888/pcd17.190325>external icon

# Who lives in these neighborhoods? Racial Inequities

Non-White Population  
Percent



NYC Caribbean Ancestry



Source: NYC DOHMH population estimates, matched from US Census Bureau intercensal population estimates, 2010-2013, updated June 2014  
U.S. Census Bureau; American Community Survey, 2013 3-year Estimates, Table S1701; generated using American Fact Finder (<http://factfinder2.census.gov/>)

For Internal Use Only  
Data preliminary and subject to change



## Caribbean New Yorkers

Caribbean Country	Estimated Number of New Yorkers
Dominican Republic	453,176
Jamaica	185,681
Guyana	140,340
Haiti	91,595
Trinidad and Tobago	89,302
St Vincent and Grenadines	14,389
Dominica	8,665
Antigua and Barbuda	6,342
Grenada	17,595
Barbados	20,150
Cuba	16,509
St Lucia	8,436
West Indies	10,745
Caribbean	8,259
<b>Total</b>	<b>1,071,184</b>

As of 2017 the U.S. cities with the largest number of Caribbean immigrants were the greater New York and Miami metropolitan areas.

There are an estimated 3,315,519 foreign born people in New York City, and 1,071,184 (32.31%) of those people are of Caribbean heritage.

Caribbean immigrants make up about of one eighth of the population in NYC

2017 report from the NYC Comptroller's Office's "Our Immigrant Population Helps Power NYC Economy."

## NYC COVID-19 Case, Hospitalization and Death Rates

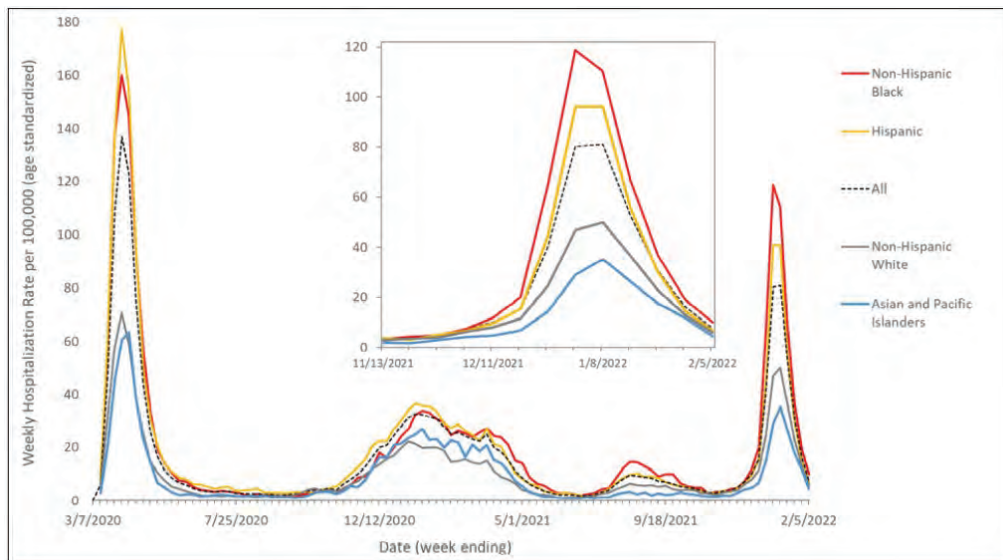
group	Cases	Hospitalizations	Deaths
Citywide	32,262.99	2,062.99	491.53
Race Asian/Pacific-Islander	24,879.24	1,100.56	482.0
Race Black/African-American	22,524.83	2,243.38	849...
Race Hispanic/Latino	29,146.41	2,194.55	875.6
Race White	24,882.88	1,217.85	526.2
Poverty Low poverty	31,040.87	1,162.2	272.28
Poverty Medium poverty	31,173.97	1,697.62	409.81
Poverty High poverty	30,927.55	2,072.69	488.39
Poverty Very high poverty	30,814.57	2,624.38	558.7

Rates by race/ethnicity and poverty group are age-adjusted.

About the data for this chart. [Get the data.](#)

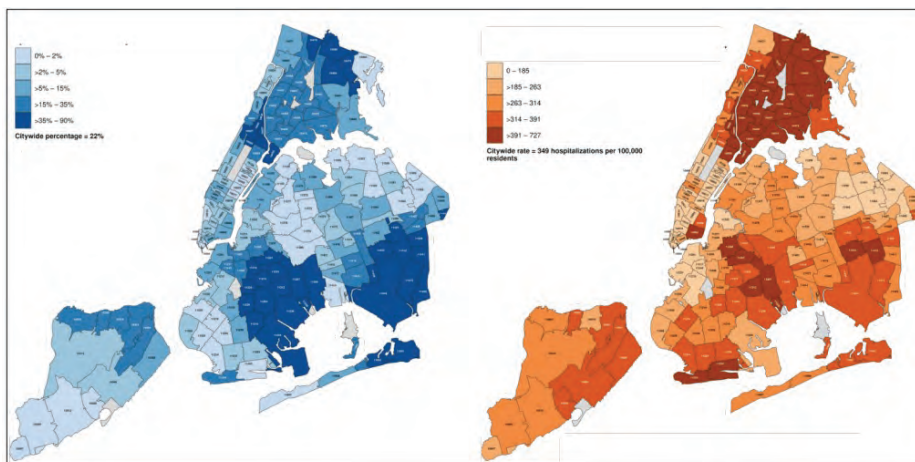


## Racial Inequities in COVID -19 Mortality New York City



Weekly age-standardized COVID-19 hospitalization rate in New York City by race/ethnicity, week ending March 7, 2020 to February 5, 2022.

## During Omicron Wave COVID-19 hospitalizations were disproportionately higher in neighborhoods with a high percentage of Black residents

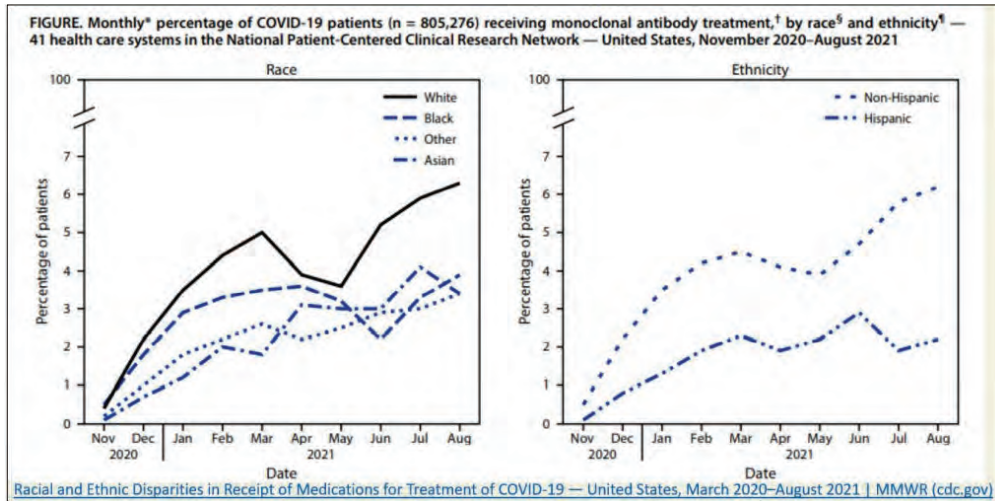


Percentage of Black residents by modified ZCTA in New York City (left) and rate of COVID-19 hospitalizations per 100,000 residents by modified ZCTA for admissions occurring during December 11, 2021 through February 4, 2022 (right).





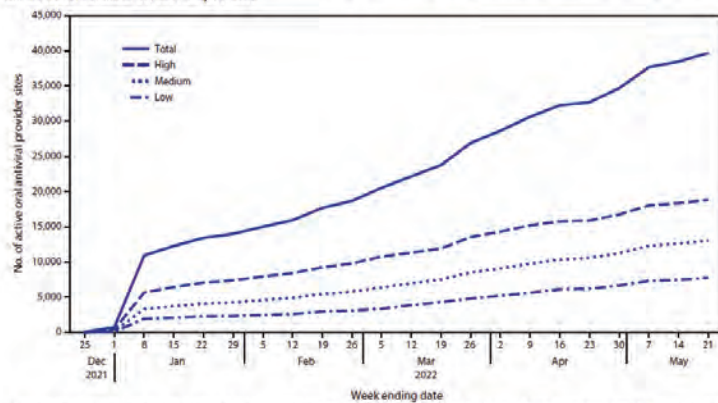
## Racial Inequities in Receipt of Monoclonal Antibody Treatment



## Provider Sites for Oral Antiviral Therapy in the US

**MMWR: NATL  
UTILIZATION &  
SOCIAL  
FACTORS**

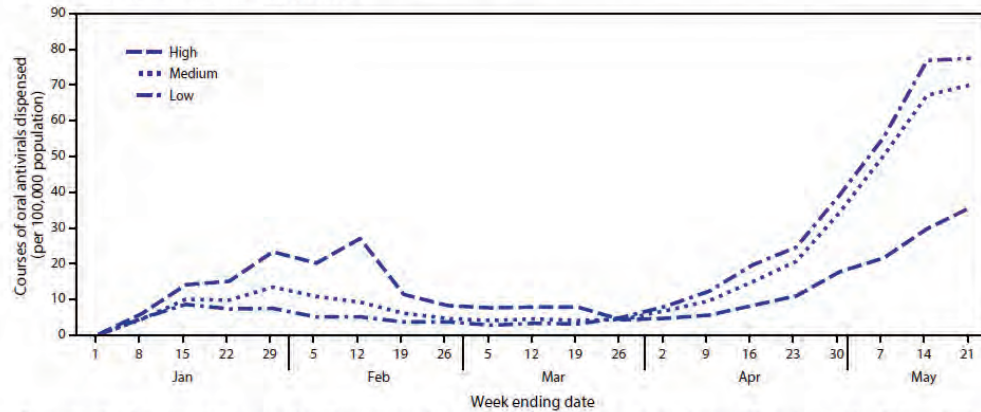
**FIGURE 2. Number of active provider sites for oral antiviral therapy against COVID-19, by week and zip code social vulnerability score\* — United States, December 23, 2021–May 21, 2022**





# National Utilization of Antiviral Therapy

FIGURE 3. Courses of oral COVID-19 antiviral therapy dispensed per 100,000 persons, by week and zip code social vulnerability level — United States, December 26, 2021–May 21, 2022\*



\* The week ending December 25, 2021, is not shown because no oral antiviral dispensing was reported during that week. Zip codes were classified as having low, medium, or high social vulnerability based on ranking within the lower, middle, and upper tertiles of the Equitable Distribution Index score.



## RESOLUTION OF THE NYC BOARD OF HEALTH DECLARING RACISM A PUBLIC HEALTH CRISIS

**WHEREAS**, racism is a system of structuring opportunity and assigning value based on how one's appearance is perceived, which unfairly advantages some individuals and communities, unfairly disadvantages other individuals and communities, and saps the strength of the whole society;<sup>20</sup> and

**WHEREAS**, racism is a race-explicit system and anti-racism requires race-explicit strategies; and

**WHEREAS**, BIPOC-led organizations and communities have been fighting racism for generations and making sacrifices to ensure progress toward a racially just future; and

**WHEREAS**, intersectionality, which acknowledges the unique impact and experience of oppression when a person or community holds multiple marginalized identities, is a critical strategy to fight the public health crisis of racism, is a central tenet of critical race theory,<sup>21</sup> and is a key framework for data analysis; and

**WHEREAS** the crisis of racism in this country is longstanding and our nation's response will need to span generations; and

**WHEREAS**, the work of undoing racism is grounded in love, as well as science and civic duty. This love is not sentimental, rather it is what James Baldwin called "the tough and universal sense of quest and daring and growth."

**NOW THEREFORE**, BE IT RESOLVED that the NYC Board of Health (BOH):

1. Declares that racism is a public health crisis;

## The Board of Health Resolution

In October 2021, the NYC Board of Health passed a resolution on racism as a public health crisis requesting that the Health Department expand its anti-racism work.



## Clarifying Terms

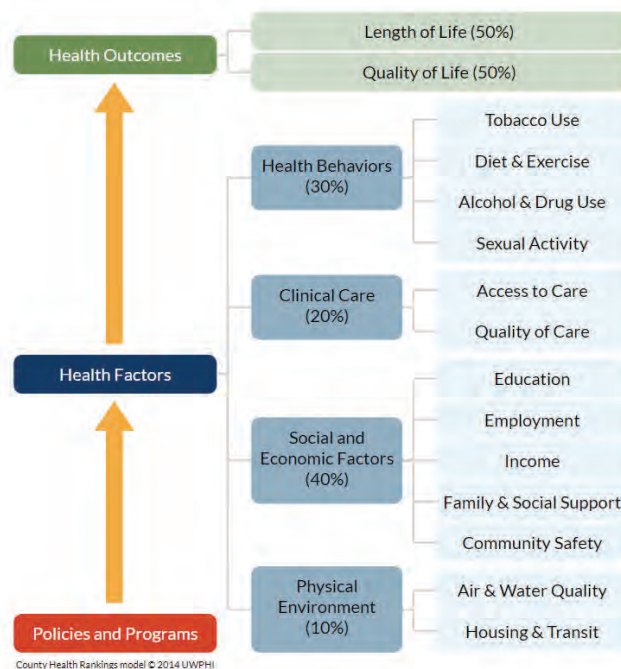
- Race is a social and political construct, based on the social interpretation of how one's identity is perceived, with no biological or genetic basis
- Racism is a system of **structuring opportunity** and **assigning value** based on how one's appearance is perceived
- Structural racism is the unequal allocation of resources—including goods, services, and **societal attention**—which manifests itself in unequal social, economic, and environmental conditions, also called the determinants of health

## Defining Health Equity

- Robert Wood Johnson Foundation definition “Health equity means that everyone has a **fair** and **just** opportunity to be as healthy as possible.
- This requires removing obstacles to health such as poverty, discrimination, and their consequences.”
- These definitional concepts are based on widely recognized ethical and human rights principles and supported by knowledge from health sciences.



## The Factors That Influence How Long and How Well We Live



## Beyond Social Determinants of Health

### Racial Disparities Exist Regardless of:

- Socio-economic status
- Health insurance
- Education
- Healthy behaviors
- Prenatal care
- Employment status



Source: <https://www.sciencedirect.com/journal/womens-health-issues/vol/30/issue/6>



# Achieving Vaccine Equity in NYC

**Community Partners: 85**

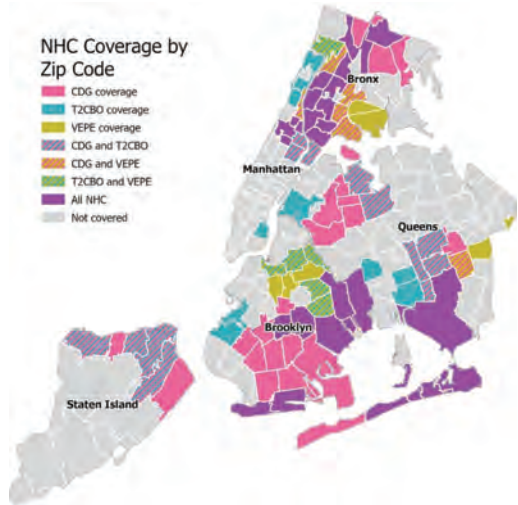
**Total # of Zip codes Covered: 74**

**Total # of CHWs: 1000+**

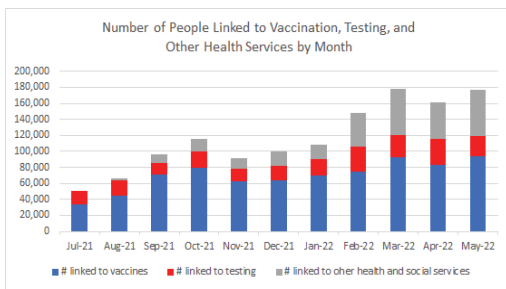
**Weekly Community Members Engaged: 100,000+**

**Weekly Vaccine Referrals/ appointments : 12,000 +**

**Languages Served:18**  
 English, African languages, American Sign Language, Arabic, Bengali, Chinese, French, Haitian Creole, Hindi, Korean, Kru, Polish, Punjabi, Russian, Spanish, Tagalog, Urdu, and Yiddish

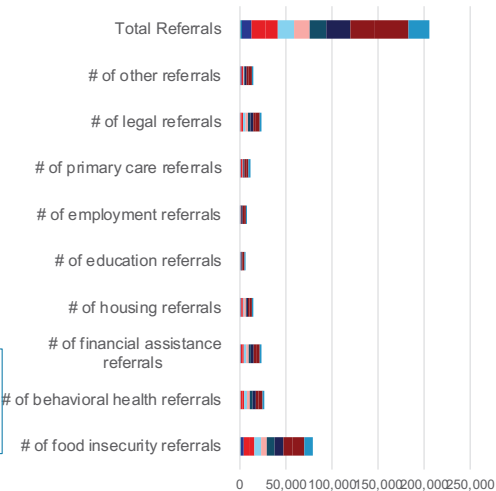


# Increasing Access to Services



"We are helping our community...We do not tell people who to vote for, and we do not force people to get vaccinated. We give information. We helped 8 people get vaccinated, 12 seniors learn how to use their phones better, and informed people that the vaccine for 5 and under will start next week."  
 – **Black Health**

## Health Care and Social Service Referrals

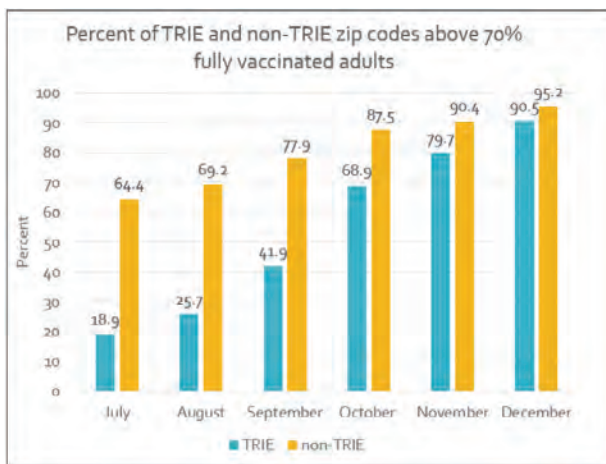






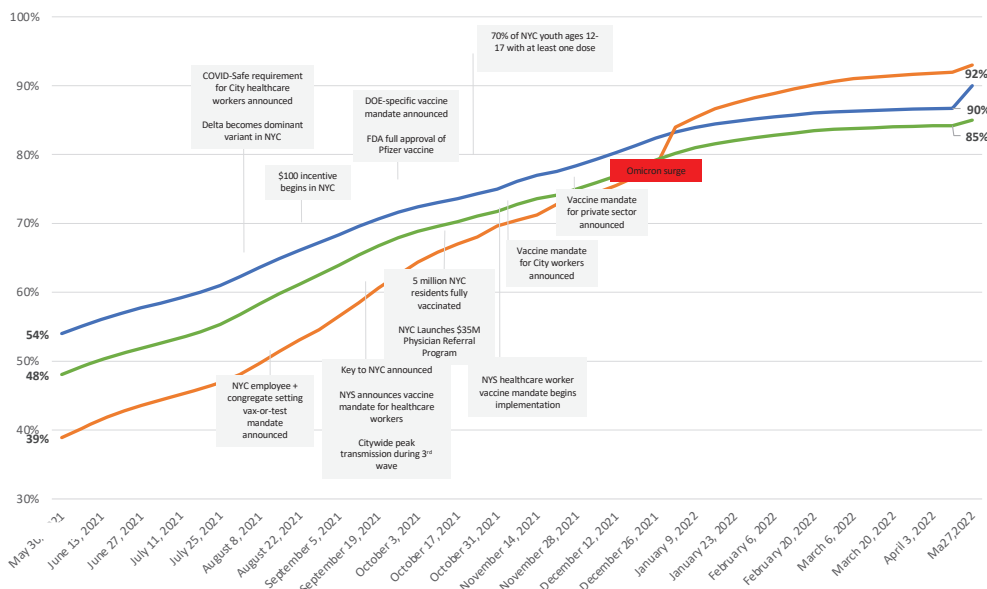
## Ensuring Equitable Access to COVID-19 Vaccines

- Through tailored engagement, community partnership and resource investment in the TRIE neighborhoods, combined with vaccination incentives and mandates, we achieved significant progress in narrowing vaccine equity gaps.



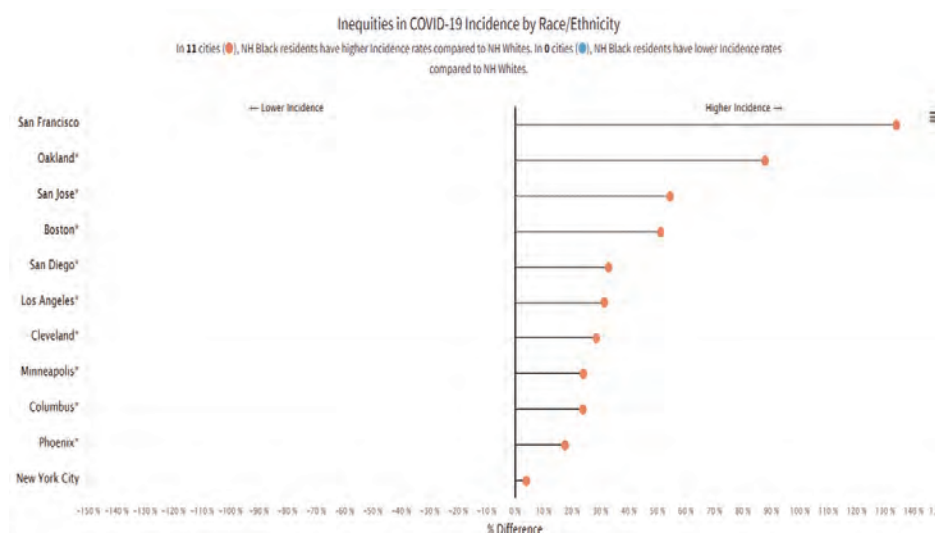
Improvements in initial COVID-19 vaccination series in Taskforce on Racial Inclusion and Equity (TRIE) neighborhoods.

## COVID-19 Equity Collective Action Impact: At Least One Dose Vaccine Coverage Over Time: Citywide, TRIE, and NYCHA





## Comparison of Inequities in COVID-19 in 11 Big Cities



[https://drexel-uhc.shinyapps.io/bchc\\_covid19/\\_w\\_869e5133/\\_w\\_b63f38c0/\\_w\\_41ea5ffe/](https://drexel-uhc.shinyapps.io/bchc_covid19/_w_869e5133/_w_b63f38c0/_w_41ea5ffe/)

### Eliminating Racial/Ethnic Disparities in Health Care: What are the Options?

- Raising public and provider awareness of racial/ethnic disparities in care;
- Expanding health insurance coverage;
- Improving the capacity and number of providers in underserved communities;
- Increasing the knowledge base on causes and interventions to reduce disparities.







## Advancing Equitable Health Outcomes

- Incorporate assessment of non-clinical factors into electronic health records to better identify priority populations

### Providers:

**Check-in** with clients to see if experiences of racial discrimination are impacting their day-to-day life.

**Discuss** their responses openly.

**Bookmark** the [DSM-5 Cultural Formulation Interview](#) to use when needed.

**Validate** individual experiences of trauma.

*Learn more:* [U.S. Department of Health and Human Services - Think Cultural Health](#)

## HEALTH EQUITY PYRAMID

Organizations should seek to make progress on both sides of the pyramid to successfully advance health equity

### Diversity of Workforce & Leadership

**LEVEL 4**  
Make public data on workforce & leadership diversity and establish clear internal accountability for diversity outcomes

**LEVEL 3**  
Make internal improvements to facilitate recruitment and retention of diverse workforce and leadership talent

**LEVEL 2**  
Analyze internally and create dashboards for data on workforce & leadership diversity

**LEVEL 1**  
Collect raw data on workforce & leadership diversity

### Patient Outcomes & Experience

**LEVEL 4**  
Make public data on patient outcomes & satisfaction segmented by race, ethnicity, language, and sex, and establish clear internal accountability for equitable patient outcomes & satisfaction


**LEVEL 3**  
Embed interventions into clinical workflows to reduce disparities in patient outcomes & satisfaction

**LEVEL 2**  
Analyze internally and create dashboards for data segmented by race, ethnicity, language, and sex

**LEVEL 1**  
Collect raw data on demographics and patient outcomes & experience



**Questions?**



**Olusimbo Ige MD, MS,MPH**  
**Assistant Commissioner**  
**Center for Health Equity and**  
**Community Wellness**  
**NYC Department of Health**  
[oige@health.nyc.gov](mailto:oige@health.nyc.gov)



# Citizenship as a Social Determinant of Health: *Health Access and Utilization with Immigrant Populations*

**Errol L. Pierre, MPA, DBA**  
September 9, 2022



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## Purpose and Objectives

### PURPOSE

*Discuss the connections between immigration and healthcare*

### OBJECTIVES

- Discuss historical context of connections between immigration and healthcare
- Share recent literature on the topic
- Quantify impacts of immigration status on healthcare by using the Public Charge regulation as a Natural Experiment
- Discuss avenues for increased access and utilization for immigrant populations

### FINANCIAL DISCLOSURE

*None*

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# Agenda

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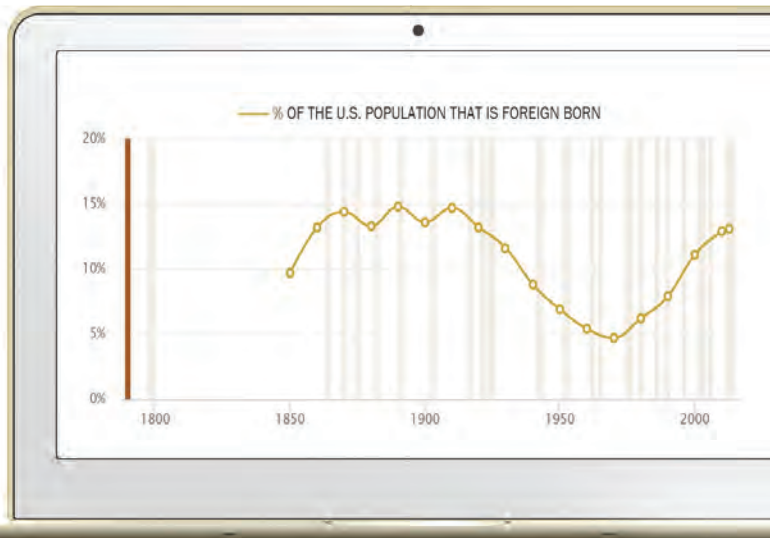


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## Immigration in America

- **Wide diversity of race and ethnicity** of foreign-born non-citizens in the U.S.
- **Various laws have been enacted** that impact the ability for immigrant populations to enter or remain in the U.S. as well as the ability to access numerous governmental healthcare programs.
- Such laws have led to **various changes in the percentage of non-citizens** in the U.S.
  - Non-citizens have ranged from 5-15% of the total population since the 1800s
  - Example of one such law is the Public Charge



U.S. Census Bureau. "Historical Census Statistics on Foreign-Born Population of the United States: 1850-2000"

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## Citizenship Status in America

- **Undocumented Persons:** Individuals who either overstay a visa or enter the United States without proper inspection at a port of entry
- **Refugees:** Individuals who permanently reside in the United States after leaving their country of origin to escape war, persecution, or a natural disaster
- **Non-Permanent Residents:** Individuals admitted for a specific period of time, including tourists, students, diplomats, and crewpersons (visa holders)
- **Permanent Residents:** Individuals who have green cards and are lawfully admitted for permanent residency in the United States
- **Naturalized Citizens:** U.S. citizens granted lawful permanent resident status after meeting the requirements established by Congress in the Immigration and Nationality Act
- **U.S. Citizens:** Individuals, by birth or through citizenship of a parent, who have the right to live and work in the United States and to receive federal assistance

Source: McAlvanah & Siwulec, 1978

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## Social Determinants of Health



### Literature Review

- **Growing focus from healthcare experts on the social determinants of health**, defined as “the factors apart from medical care that can be influenced by social policies and shape health in powerful ways.” (Braveman & Gottlieb, 2014)
- **Health outcomes and disease burden is attributed to the conditions in which people live, work, and are born.** (Marmot, 2017; Gurewich, Garg, & Kressin, 2020)
- Evidence shows **investments into childhood development, economic opportunities, and education** would do more for improving health outcomes and extending life than simply providing medical care. (Wilensky, 2016)

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## Citizenship Status as a Social Determinant of Health

- **The United States launched a 2030 Healthy People initiative focused on five key areas of social determinants:** economic stability, education, social and community context, health and healthcare, and neighborhood and built environment. *(U.S. Department of Health and Human Services, 2020)*
- **Citizenship status may have a profound effect on a person's health and ability to secure health services.** *(Castaneda et al., 2015)*
- Despite the likely effect on healthcare access and quality, **citizenship status is currently missing from the list of key SDOH.** *(Marmot & Allen, 2014)*



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## Citizenship Status as a Social Determinant of Health

### *Specific examples from research:*

#### Systemic Racism & Bias

False mythologies promoted by influential policy experts exert that black and Hispanic non-citizens “respond only weakly to chances to get ahead through education and work,” suggesting that both ethnic groups seek to stay in their current socioeconomic statuses and do not seek a better life. *(Mead, 2020)*

#### Language & Chronic Conditions

- The prevalence of chronic diseases like diabetes and hypertension can be associated with restrictive immigration and healthcare policies *(Hall & Cuellar, 2016)*
- Language barriers add further hurdles to immigrants seeking coverage, as seen in lower enrollment rates in public programs and higher uninsured rates among Asian immigrants. *(DeNavas-Walt et al., 2014)*

#### Access to Care

Older immigrants that newly arrive in the United States are the least likely to have coverage or access to social security, as they face more structural barriers than many others in seeking care. *(Choi, 2006)*

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## Historical Context: Citizenship Status & Health Policy



Pre 1776 – 1865

### 1781 – Articles of Confederation

Citizenship first gets linked to access to public benefit and equal protection under the law  
*(Daniels, 2002)*



1865 – 1920

### 1865 – 13<sup>th</sup> Amendment

#### 1892 – Chinese Exclusion Act

**Immigration Act of 1882** creates “Public Charge” & Diseases  
*(Lee, 2002; CIS, 2019)*



1920 – 1965

### Social Security Act of 1935

#### Immigration Act of 1924

Immigrants went from 13% to 5% of the population. Despite vaccines, associating immigrants with disease persisted



1965 – 1986

### Immigration & Nationality Act of 1965

#### Medicaid & Medicare

Eligibility rules for non-citizens create barriers



1986 – 2016

### Immigration Reform Act of 1986

#### Personal Responsibility and Work Opportunity Reconciliation Act of 1993

**Affordable Care Act of 2010**

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## Present Day: Citizenship Status & Health Policy

### 2016 – 2020: The Trump Administration

- Within five days of taking office in 2017, President Trump executed various executive orders seeking to dramatically change the U.S. immigration system. *(Pierce & Selee, 2017)*
- On August 14, 2019, the Trump administration released its draft rule changes to the Public Charge, which redefined the term as “an alien who receives one or more public benefits for more than 12 months, in total, within any 36-month period.” *(U.S. Citizenship and Immigration Services, 2020)*
- Despite the COVID-19 pandemic, which has led to high unemployment, Medicaid enrollment in California continued to shrink; Policy experts believe the linkage between health coverage and immigration status caused these detrimental effects. *(Bluth & Hart, 2020)*

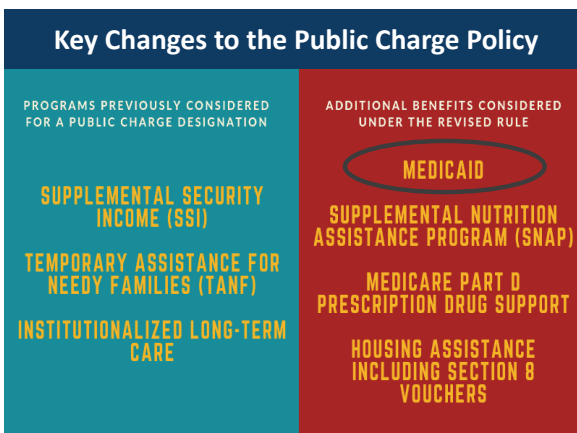
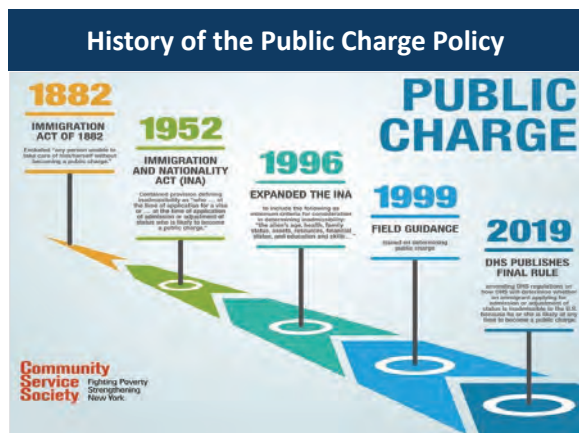
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# What is the Public Charge Policy?

**Public charge** is a term used to refer to an individual who is likely to become primarily dependent on the government for subsistence, as demonstrated by the receipt of various public benefits. Those deemed to be a Public Charge may be denied visas or permission to enter the country due to their disabilities or lack of economic resources. In August 2019, the Trump Administration changed the criteria used in Public Charge determinations. (*Department of Homeland Security, 2019*)



Source: Hepper, D., (2019), A Broader Definition of Public Charge Will Harm Millions of Families. Federal Policy, News. Children's Institute.



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## Research Question: *Is Citizenship Status a Social Determinant of Health?*

### Hypothesis Development

#### ENROLLMENT

**H1:** Non-citizens are more likely to disenroll from Medicaid or the Essential Plan than are U.S. citizens.

- **H2:** Compared with U.S. citizens, non-citizens are more likely to disenroll from Medicaid or the Essential Plan following *implementation* of the revised Public Charge rule.
- **H3:** Non-permanent residents are more likely to disenroll from Medicaid or the Essential Plan than are permanent residents after *implementation* of the revised Public Charge.

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## Research Question: *Is Citizenship Status a Social Determinant of Health?*

### Hypothesis Development

#### UTILIZATION

**H4:** U.S. citizens use more healthcare services than non-citizens.

- **H5:** Compared with U.S. citizens, non-citizens are more likely to use healthcare services following the *announcement* of the revised Public Charge rule.
- **H6:** Compared with U.S. citizens, non-citizens are less likely to use healthcare services following *implementation* of the revised Public Charge rule.
- **H7:** On average, the healthcare costs of non-citizens are lower than the healthcare costs of U.S. citizens.

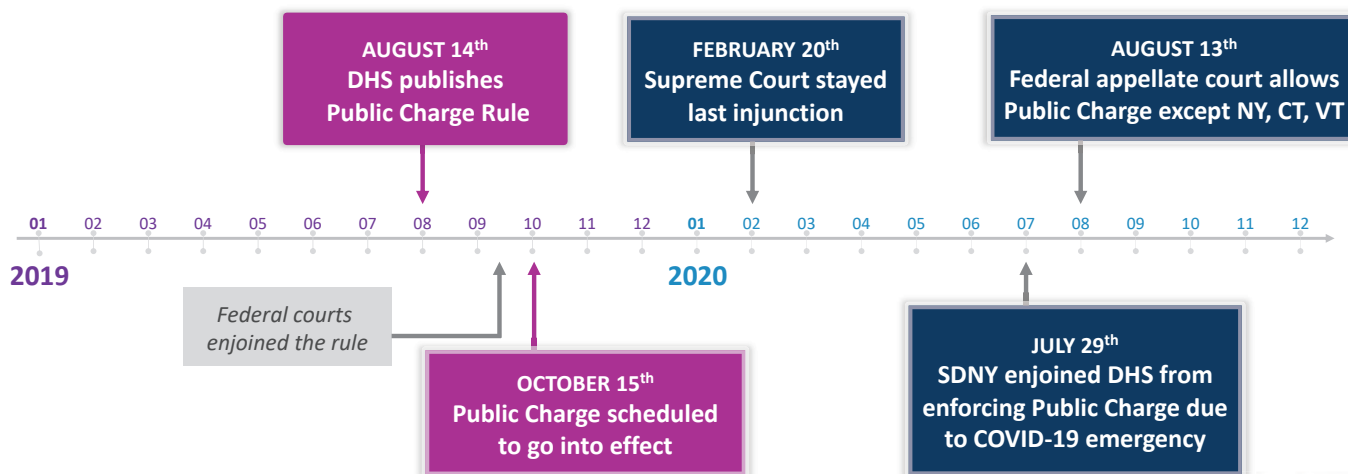
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## Public Charge Timeline

 = Measured treatments

### From Proposed Rule to Implementation



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## Data

- **Data Source:** Sample from the large non-profit health plan in New York City
- **Study Period:** 18-month study period from August 1, 2018, through February 20, 2020
- **Health Plans:** Medicaid & Essential Plan
- **Eligible Observations:** Individuals with at least 6 months of coverage during the 18-month study period

Citizenship Description	Male	Female	Total
U.S. Citizen	147,160 (44.14%)	186,213 (55.85%)	333,373 (41.89%)
Naturalized Citizen	19,634 (41.96%)	27,158 (58.03%)	46,792 (5.88%)
Permanent Resident	101,216 (44.23%)	127,609 (55.76%)	228,825 (28.76%)
Non-Permanent Resident	3,931 (30.67%)	8,887 (69.33%)	12,818 (1.60%)
Missing	71,664 (41.21%)	102,232 (58.79%)	173,896 (21.85%)
<b>Total</b>	<b>343,605 (43.18%)</b>	<b>452,099 (56.81%)</b>	<b>795,704 (100%)</b>



**Sample Size**  
Medicaid-eligible  
18-64



**Timeframe**  
August 2018 through  
February 2020



**Citizenship Status**  
U.S Citizens  
Naturalized Citizens  
Permanent Residents  
Non-Permanent Residents



**Utilization Data**  
Primary Care  
Specialist Care  
Emergency Room



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## Research Design: Natural Experiment

A **Natural Experiment** leverages the announcement and implementation of the Public Charge rule to determine the differences in both Medicaid enrollment and healthcare utilization based on citizenship status.

- The Public Charge is not governed or controlled by this research study, as such, it can be used as a natural experiment (*Leatherdale, 2017*)

**Difference-in-Differences Hazard Model** is used to observe differences in healthcare coverage and usage before and after the enactment of the policy change to ensure that other time-dependent trends do not impact the results

- Public health researchers commonly use this method to eliminate the threat of inaccurate conclusions arising from potential changes in behavior (*Dimick & Ryan, 2014*)



**Dependent Variables**

Medicaid Enrollment  
& Utilization



**Independent Variable**

Citizenship Status



**Explanatory Variables**

Age, Charlson Index, Gender, Health Plan, Language, Month, Race, "After Announcement" & "After Implementation"



**Regression Analysis**

Differences in Difference



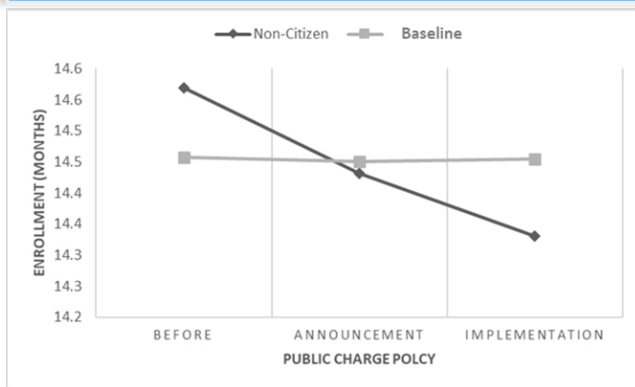
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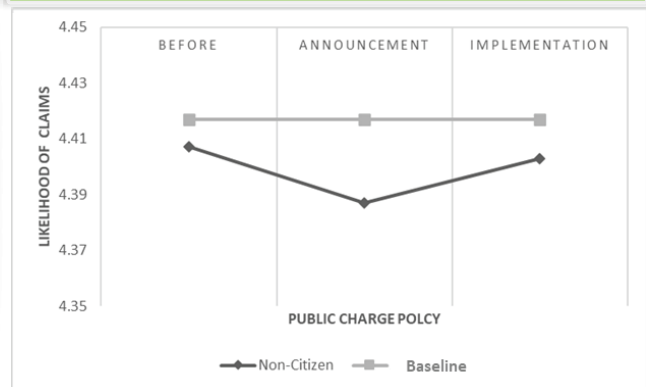


## Differences-in-Differences Analysis

### Enrollment Analysis



### Utilization Analysis



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## Research Results





# Results – Enrollment

Observations from Data Analysis in RStudio

## Disenrollment by Citizenship Status

**H1: Non-citizens are more likely to disenroll from Medicaid or the Essential Plan than are U.S. citizens**

Predictors	Disenrolled	
	Estimates	p
Intercept	14.458***	<0.001
Age	0.022***	<0.001
Gender (Male)	-0.601***	<0.001
Charlson Index	0.309***	<0.001
Non-Citizen	0.111***	<0.001
Observations	2,365,498	
R <sup>2</sup>	0.036	

**U.S. citizens disenroll at a 10.5%\* higher rate than non-citizens.**  
**Thus, H1 is not supported.**

\*Odds ratio calculation:  $\text{Exp}(-0.111)-1 = -10.5\%$



# Results – Enrollment

Observations from Data Analysis in RStudio

## Disenrollment by Citizenship Status – Implementation of Public Charge

**H2: Compared with U.S. citizens, non-citizens are more likely to disenroll from Medicaid or the Essential Plan following implementation of the revised Public Charge rule.**

Predictors	Disenrolled	
	Estimates	p
Intercept	14.450***	<0.001
Age	0.022***	<0.001
Gender (Male)	-0.601***	<0.001
Charlson Index	0.309***	<0.001
Race/Ethnicity (Asian)	0.618***	<0.001
Race/Ethnicity (Black)	-0.231***	<0.001
Race/Ethnicity (Hispanic)	0.975***	<0.001
Non-Citizen	0.046 **	0.005
Non-Citizen - After Announcement	-0.026	0.348
Non-Citizen - After Implementation	-0.124***	<0.001
Observations	2,365,498	
R <sup>2</sup>	0.036	

**Non-citizens disenroll at an 8.1%\* higher rate than U.S. citizens after implementation of the Public Charge.**  
**Thus, H2 is supported.**

\*Odds ratio calculation:  $\text{Exp}(-0.046 + 0.124)-1 = 8.1\%$

p<0.05 \*\*p<0.01 \*\*\*p<0.001





## Results – Enrollment

Observations from Data Analysis in RStudio

### Disenrollment by Non-citizens – Implementation of Public Charge

**H3: Non-permanent residents are more likely to disenroll from Medicaid or the Essential Plan than are permanent residents after implementation of the revised Public Charge.**

Predictors	Disenrolled	
	Estimates	p
(Intercept)	-27.768***	<0.001
Age	-0.025***	<0.001
Gender (Male)	0.670***	<0.001
Asian	-0.659***	<0.001
Black	0.572***	<0.001
Hispanic	-1.067***	<0.001
Charlson Index	-0.271***	<0.001
Non-Permanent Resident	1.466***	<0.001
Permanent Resident - After Announcement	20.768***	<0.001
Non-Permanent Resident - After Announcement	20.344***	<0.001
Permanent Resident - After Implementation	20.714***	<0.0001
Non-Permanent Resident - After Implementation	20.682***	<0.001
Observations	954,378	
R <sup>2</sup>	0.249	

p<0.05   \*\*p<0.01   \*\*\*p<0.001

Non-permanent residents disenroll at a 333% higher rate than permanent residents after implementation of the Public Charge.

Thus, H3 is supported.

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## Results – Utilization

Observations from Data Analysis in RStudio

### Utilization by Citizenship Status

**H4: U.S. citizens use more healthcare services than non-citizens.**

Predictors	Utilization	
	Estimates	p
Intercept	4.417***	<0.001
Age	-0.008***	<0.001
Gender (Male)	0.241***	<0.001
Asian	-0.145***	<0.001
Black	0.046***	<0.001
Hispanic	-0.082***	<0.001
Charlson Index	-0.098***	<0.001
Non-Citizen	-0.010***	<0.001
Observations	2,365,498	
R <sup>2</sup>	0.258	

p<0.05   \*\*p<0.01   \*\*\*p<0.001

Non-citizens incur paid medical claims at a 1.0% higher rate than U.S. citizens.

Thus, H4 is not supported.

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## Results – Utilization

Observations from Data Analysis in RStudio

### Utilization by Citizenship Status – Announcement of Public Charge

**H5: Compared with U.S. citizens, non-citizens are more likely to use healthcare services following the announcement of the revised Public Charge rule.**

Predictors	All Utilization	
	Estimates	p
Intercept	4.417***	<0.001
Age	-0.008***	<0.001
Gender (Male)	0.241***	<0.001
Asian	-0.145***	<0.001
Black	0.047***	<0.001
Hispanic	-0.082***	<0.001
Charlson Index	-0.098***	<0.001
Non-Citizen	0.003	0.296
Non-Citizen - After Announcement	-0.030***	<0.001
Non-Citizen - After Implementation	-0.014 *	0.033
Observations	2,365,498	
R <sup>2</sup>	0.258	

Non-citizens incur paid medical claims at a 2.7% higher rate than U.S. citizens after the Public Charge Announcement.

Thus, H5 is supported.

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## Results – Utilization

Observations from Data Analysis in RStudio

### Utilization by Citizenship Status – Implementation of Public Charge

**H6: Compared with U.S. citizens, non-citizens are less likely to use healthcare services following implementation of the revised Public Charge rule.**

Predictors	All Utilization		PCP Utilization		ED Utilization		Specialist Utilization	
	Estimates	p	Estimates	p	Estimates	p	Estimates	p
Intercept	4.417***	<0.001	5.584***	<0.001	5.650***	<0.001	5.681***	<0.001
Age	-0.008***	<0.001	-0.011***	<0.001	-0.022***	<0.001	-0.016***	<0.001
Gender (Male)	0.241***	<0.001	0.300***	<0.001	0.066***	<0.001	0.146***	<0.001
Asian	-0.145***	<0.001	-0.635***	<0.001	0.862***	<0.001	0.190***	<0.001
Black	0.047***	<0.001	0.079***	<0.001	-0.431***	<0.001	0.125***	<0.001
Hispanic	-0.082***	<0.001	-0.096***	<0.001	-0.243***	<0.001	-0.130***	<0.001
Charlson Index	-0.098***	<0.001	-0.077***	<0.001	-0.057***	<0.001	-0.132***	<0.001
Non-Citizen	0.003	0.296	-0.185***	<0.001	0.200***	<0.001	0.098***	<0.001
Non-Citizen - After Announcement	-0.030***	<0.001	-0.044***	<0.001	-0.023	0.207	-0.025 **	0.004
Non-Citizen - After Implementation	-0.014 *	0.033	-0.002	0.817	-0.016	0.417	-0.041***	<0.001
Observations	2,365,498		2,365,498		2,365,498		2,365,498	
R <sup>2</sup>	0.258		0.173		0.048		0.128	

There is no statistical difference in healthcare utilization between non-citizens and U.S. citizens after the Public Charge announcement.

Thus, H6 is not supported.

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## Results – Utilization

Observations from Data Analysis in RStudio

### Utilization by Citizenship Status – Implementation of Public Charge

*H7: On average, the healthcare costs of non-citizens are lower than the healthcare costs of U.S. citizens.*

Total score: Healthcare Costs			
Predictors	Estimates	Std. Error	p
(Intercept)	2,672	567	<0.0001
U.S. Citizens	-476	281	0.09049
Naturalized Citizens	-1,512	450	0.00079
Permanent Residents (Non-Citizens)	295	279	0.28979
Non-Permanent Residents (Non-Citizens)	2,841	1,144	0.01300
Gender (Male)	8,851	215	<0.0001
Charlson Index	2,750	88	<0.0001
Enrollment Duration	-96	25	0.00014
Age	-501	8	<0.0001
Observations	1,685,570		
R <sup>2</sup> / R <sup>2</sup> adjusted	0.1781 / 0.1781		

There is no statistical difference in per-person healthcare costs between U.S. citizens and non-citizens.

Thus, H7 is not supported.

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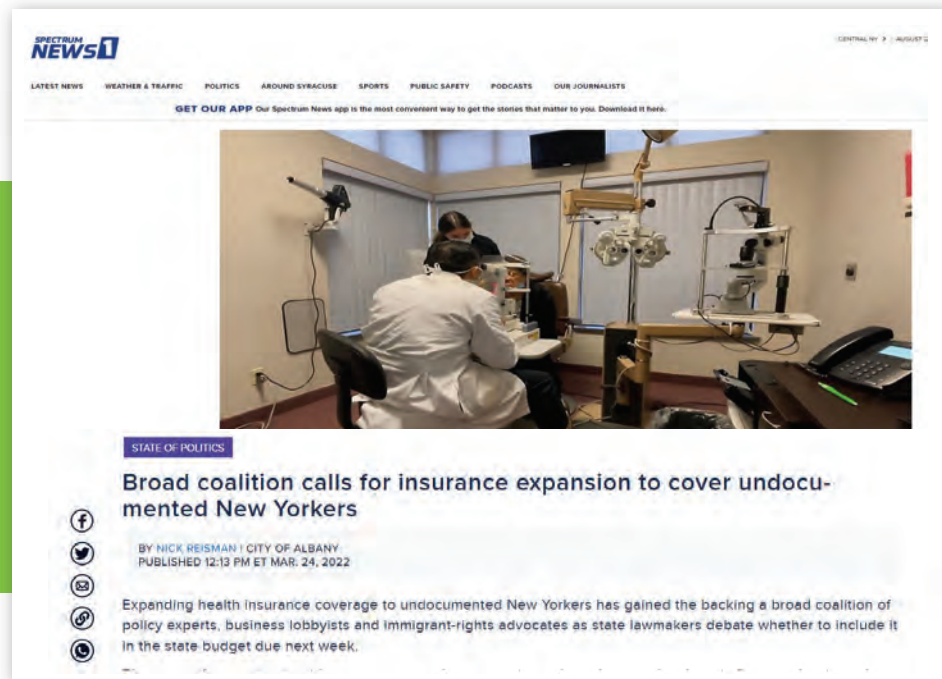
## Research Implications







## Coverage for Undocumented New Yorkers...



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## Coverage for Undocumented New Yorkers...

### New York Statistics

- NY is the 4<sup>th</sup> largest “unauthorized” immigrant population in the country after CA, TX, and FL.
- 867,000 unauthorized immigrants among NY’s 19 million residents
  - 74% work, live, reside in New York City
  - 90% are aged 19 years old or older
  - 53% are uninsured

### Community Service Society Study

Table 2: Unauthorized NYS Population by Coverage and Immigration Status (Baseline)

	Unauthorized Adults (Age 19+)						Unauthorized Children (Age 0-18)		Total Unauthorized	
	Undocumented Adults		PRUCOL Adults		Total Unauth. Adults (Undoc. + PRUCOL)		Count	Share	Count	Share
	Count	Share	Count	Share	Count	Share				
Uninsured Total	264,000	80%	180,900	40%	444,900	57%	12,100	15%	457,000	53%
- Prequalified for ER Medicaid	68,000	21%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
- Not prequalified for ER Medicaid	196,000	59%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Medicaid/CHIP (incl. Historic ER Medicaid)	32,000	10%	53,000	12%	85,000	11%	56,600	70%	142,500	16%
Other/Private	34,000	10%	222,200	48%	255,300	32%	12,000	15%	267,500	31%
<b>Total</b>	<b>330,000</b>		<b>456,100</b>		<b>786,100</b>		<b>80,900</b>		<b>867,000</b>	

Source: Benjmin, E., (2016), "How Can New York Provide Health Insurance Coverage to its Uninsured Immigrant Residents?", Community Service Society.

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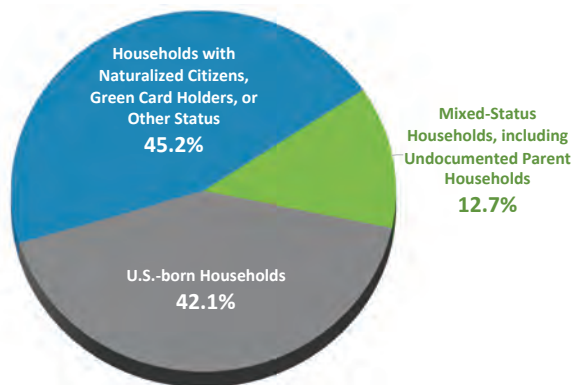


## Nearly 60% of New Yorkers Live in Households with at Least One Immigrant

### Four categories for households:

- 1. U.S.-born-only households:**  
Every household member is U.S.-born
- 2. Naturalized citizens, green card holders, or other status households:** The household has one or more members who is a naturalized citizen, green card holder, or other status or U.S.-born citizens
- 3. Mixed-status household:**  
At least one household member is undocumented
- 4. Undocumented parent household:**  
A subset of mixed-status household, above, in which children are living with at least one undocumented parent

Household Types in NYC (%)



Naturalized citizens and green card holders or other status holders are more likely to live in married couple families (58.7% and 61.4%, respectively) than the city population as a whole (54.4%).

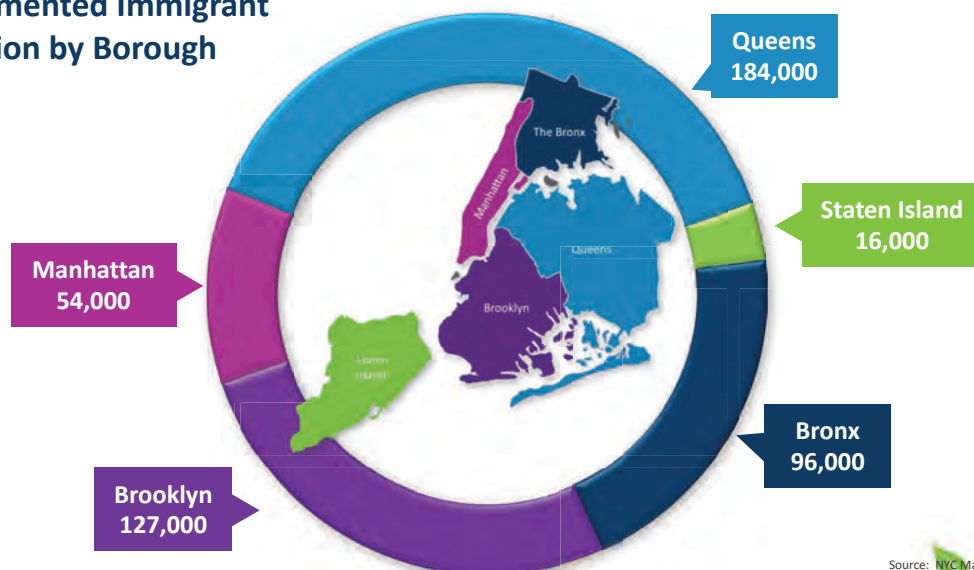
Source: NYC Mayor's Office of Immigration

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## The Largest Portion of Undocumented Immigrants Continue to Reside In Queens, Followed by Brooklyn and the Bronx

### Undocumented Immigrant Population by Borough



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## Coverage for Undocumented New Yorkers

### Imperatives for Success



#### Communication & Education

*Need new & innovative ways to reach eligible populations*



#### “No Wrong Door”

*Reduce stigma of citizenship status with systemic review of policies & procedures*



#### Simplicity

*Need to simplify the complexity of enrollment, navigation, and recertification*



#### Extend Recertification

*Lessons on “continuity of coverage” learned from the Federal Emergency Period in 2020/2021*



#### Ethnically Diverse Physician Workforce

*Culturally competent care including language & cultural considerations*

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## Questions?

Citizenship Status as a Social Determinant of Health



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# **Covid-19 Pandemic Racial & Ethnic Disparities in Treatment, Hospitalization & Deaths**

Amos Charles, MD  
Clinical Associate Professor of Medicine  
Warren Alpert Medical School of Brown University  
Providence, RI

September 9, 2022

## **Objectives**

- Overview of Covid-19 Pandemic infection
- Review of current guidelines for prevention & treatment of Covid-19 infection
- Review reports of racial and ethnic disparities in treatment, hospitalization and death
- Challenges for improvement of racial & ethnic disparities with continued Covid-19 infection (epidemic/endemic) spread





I have no financial disclosures

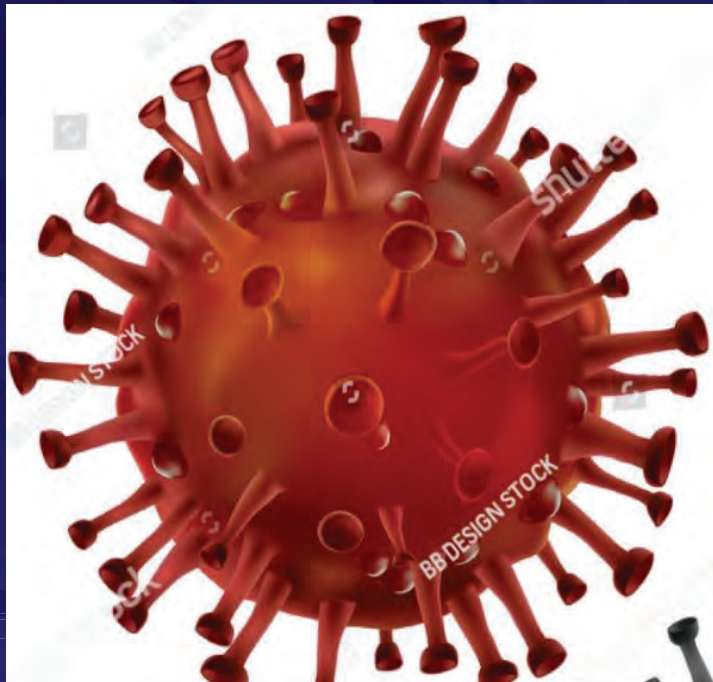
## Coronaviruses

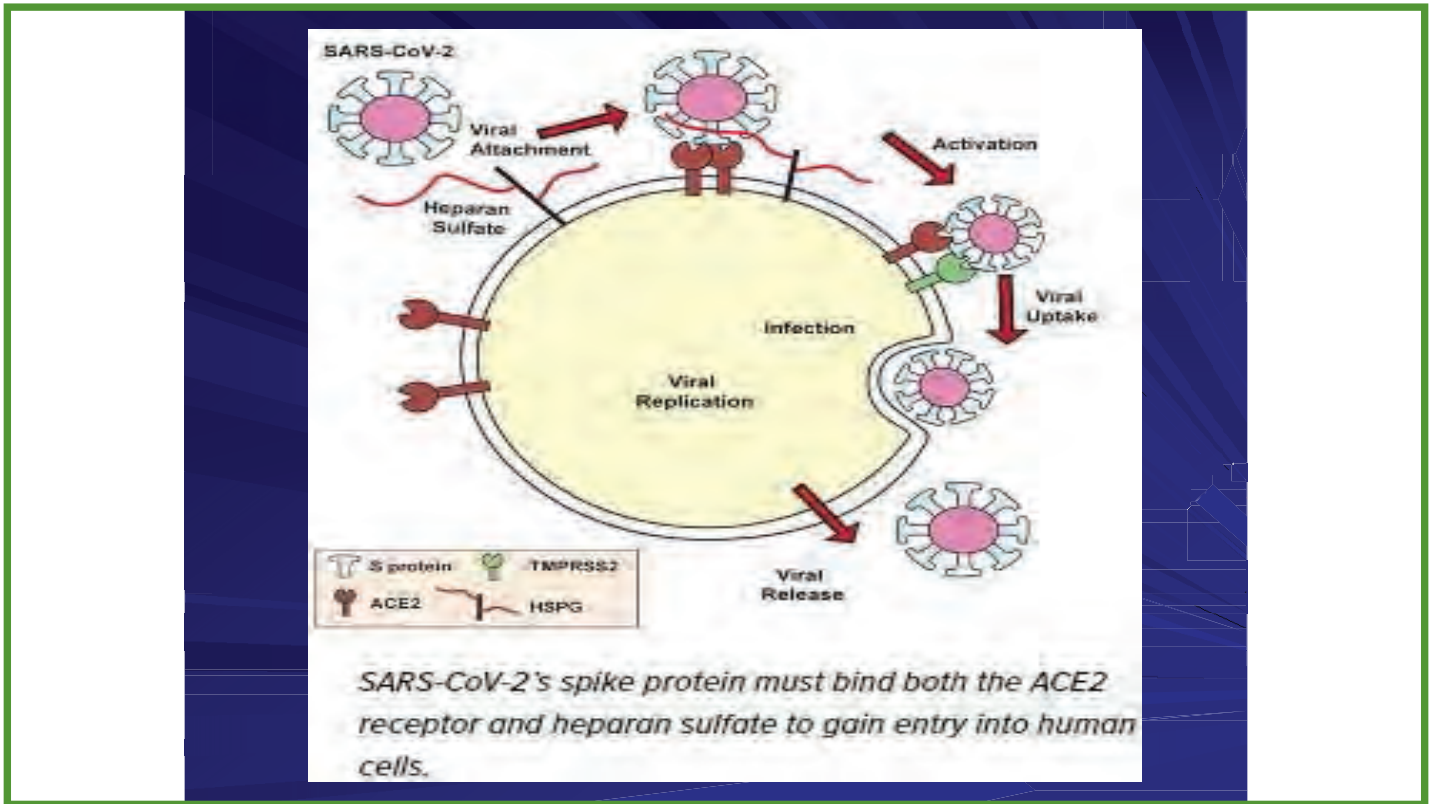
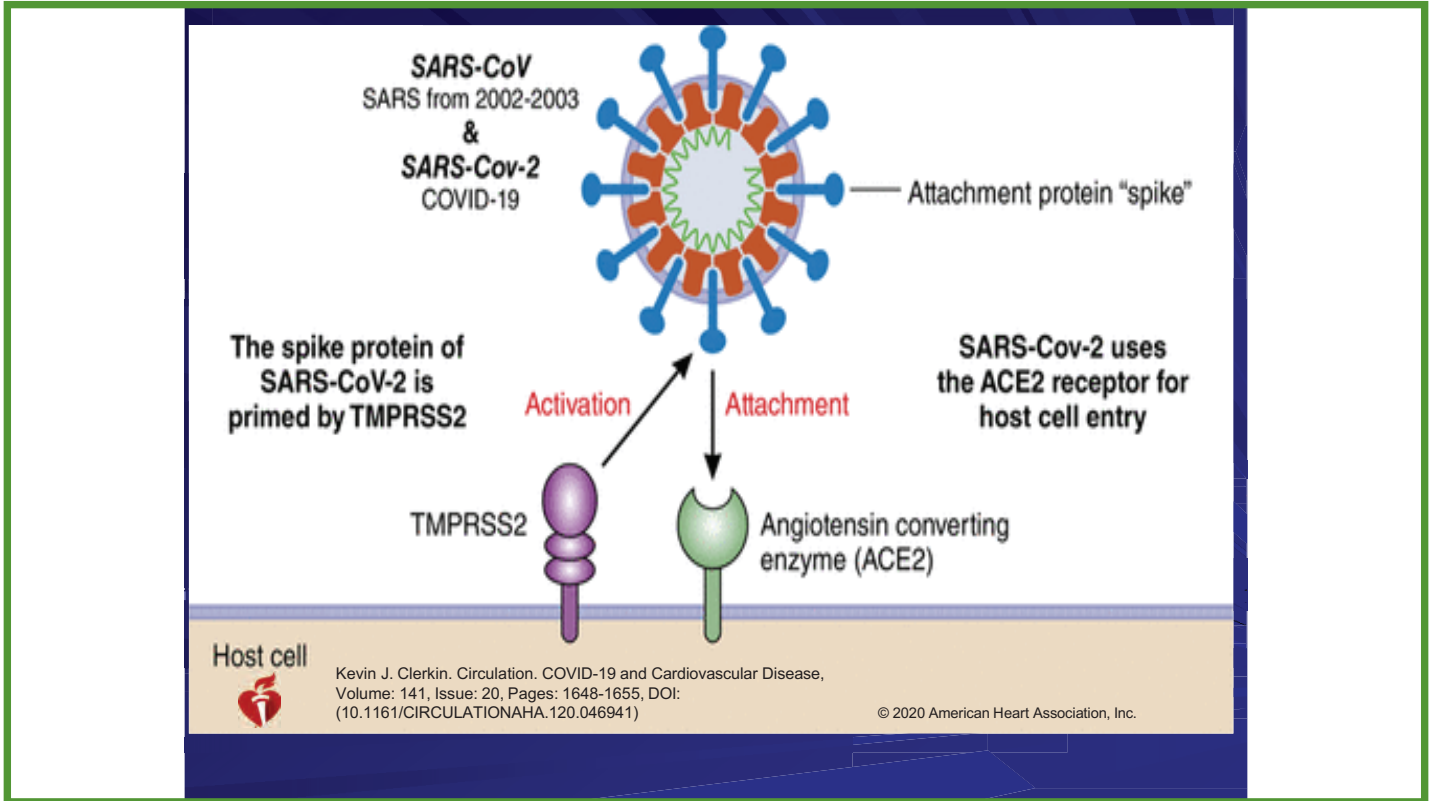
- Enveloped (+)Stranded Coronaviridae RNA Family Viruses
- Members of the Sub-family Coronavirinae
- Four Genera
  - Alphacoronavirus
  - Betacoronavirus
    - SARS-CoV-2 (Covid-19)
    - SARS-CoV (Severe Acute Respiratory Syndrome)
    - MERS-CoV (Middle East Respiratory Syndrome)
  - Gammacoronavirus
  - Deltacoronavirus



## SARS-CoV Particles

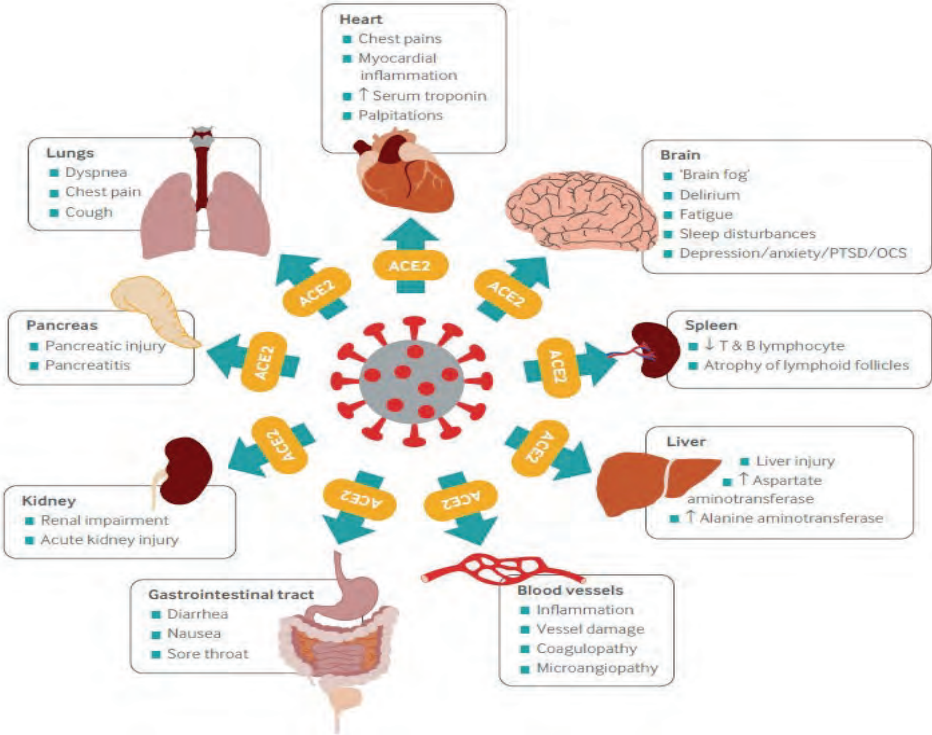
- ❑ Spherical & coated with spikes of crown-like proteins that allow the virus to bind to and infect healthy cells.
- ❑ Beneath the protein spikes is a layer of membrane
  - ❑ Can be disrupted by detergents & alcohols
- ❑ Inside the membrane is the virus genetic material
- ❑ Once the virus infects cells, it is internalized, undergoes genetic replication and maturation provokes an inflammatory response through infiltration, activation of immune cells throughout the body.







□ The ACE-2 receptor is present in many cell types throughout the human body highlighting the virus ability to cause multi- organ dysfunction.







## Covid-19 Variants

- ❑ RNA Viruses have small genomes (typically 10,000 bases) and a high per base mutation rate which are subject to constant genetic changes leading to large number of variants.
- ❑ Known Covid-19 Variants
  - Alpha Variant
  - Beta Variant
  - Delta Variant
  - Omicron Variants
    - BA1, BA2, BA4, BA5 etc

- ❑ Clinical spectrum of Covid-19 infection ranges from asymptomatic infection to fatal disease.
- ❑ In many people, a range of symptoms can remain after clearance of the acute infection, a condition that is now known as Long Covid.
- ❑ Long Covid symptoms can continue or develop several weeks to months after acute covid-19 infection.





## Covid-19 continues to spread worldwide

- ❑ Virus most often spreads through people who have symptoms.
- ❑ Person-to Person
  - ❑ Droplets or aerosol (most common)
    - ❑ Person coughs, sneezes, talks, sings
    - ❑ Anyone within 6 feet can get it into their lungs
  - ❑ Airborne Transmission
    - ❑ Virus can live in the air for up to 3 hours
  - ❑ Surface Transmission (less common)
- ❑ Virus can live on surfaces like plastic, stainless steel for 2-3 days
  - ❑ Fecal-oral (viral particles found in infected people's poop)
- ❑ Asymptomatic persons can also spread disease to others.

## Covid-19 infection Spread

- ❑ Estimated that on average, every person who has Covid-19 will pass it on to 2 or 2.5 people. One study reports even higher numbers with one sick person infecting between 4.7 and 6.6 others.
- ❑ Note: Children tend to get infected less often and have milder symptoms than adults. However, they can still catch and spread the infection to others.
- ❑ Someone who has the flu gives it to an average of 1.1 to 2.3 others.
- ❑ One person with measles might spread it to 12- 18 others.



## Covid-19 Pandemic or Endemic?

- ❑ Covid-19: Declared a Public Health Emergency of International concern in January 2020
- ❑ Covid-19: Declared a Pandemic (Worldwide spread) by the WHO on March 11, 2020

## General markers of Endemic Disease

- ❑ Worldwide spread of the disease is brought under control to a localized area.
- ❑ Globally present but at expected or “normal levels”.
- ❑ Disease spread and infection rates are “predictable” rather than skyrocketing.



# Covid-19 Pandemic or Endemic?

- July 2022:
  - Data on Covid-19 Nationally and Worldwide
    - ? Pandemic
    - ? Endemic

## WHO Coronavirus (Covid-19) Dashboard (7/25/2022)



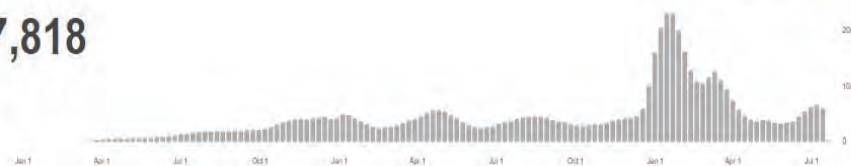


Globally, as of 5:12pm CEST, 25 July 2022, there have been 566,977,818 confirmed cases of COVID-19, including 6,376,503 deaths, reported to WHO. As of 19 July 2022, a total of 12,219,375,500 vaccine doses have been administered.

### Global Situation

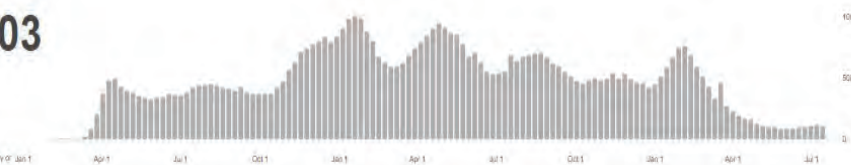
**566,977,818**

confirmed cases



**6,376,503**

deaths



Source: World Health Organization  
Data may be incomplete for the current day or week.

### Situation by WHO Region

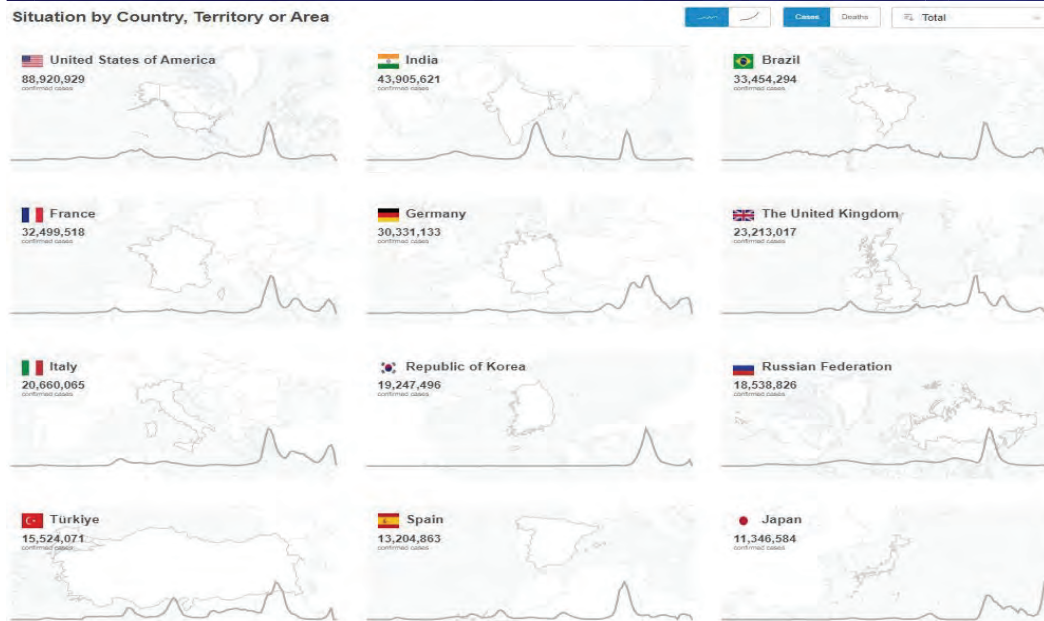
Europe	238,567,709 confirmed
Americas	168,183,683 confirmed
Western Pacific	69,359,556 confirmed
South-East Asia	59,187,567 confirmed
Eastern Mediterranean	22,490,905 confirmed
Africa	9,187,634 confirmed

Source: World Health Organization  
Data may be incomplete for the current day or week.

Jan 1



## Situation by Country, Territory or Area



## How far have we come since January 2020?

- We have come a long way & made a lot of progress.
  - Proven effective preventive measures
    - Vaccines
    - Pre & Post-Exposure Therapeutics
- We still have a long way to go
  - Racial & Ethnic disparities in delivery and access to effective control measures & treatment of infection remains a lingering problem.
    - A major contributing factor preventing rapid/successful elimination of Covid-19 pandemic





- ❑ Inequities and disparities in health care access and qualities in the United States are well documented before the Covid-19 pandemic.
- ❑ Well-established data that demonstrates people from racial minority groups in western countries experience disproportionate socioeconomic and structural determinants of health disadvantages.

The Agency for Healthcare Research and Quality (AHRQ) releases an annual report **National Healthcare Quality & Disparity Report:**

- ❑ 2018:
  - ❑ When compared to their White counterparts, Blacks, Asians, and Hispanic & Latinx were:
    - ❑ more likely to experience delays in receiving routine emergency care
    - ❑ less likely to have a Primary Care Provider
  - ❑ Same disparity exists for individuals in low income and poor households



- ❑ Covid-19 pandemic has brought deep-seated inequities in the US health care system to the forefront of public consciousness.
- ❑ In the first month of the outbreak, evidence appeared that there would be a higher burden of Covid-19 infection, hospitalization, and mortality in black patients as compared to white.
- ❑ In NY City, the case rate was 1.6 times higher in black and 1.4 times higher in Latinx than white residents.
- ❑ Further the death rate for each group was twice as high as in their white counterparts.

Poulson, M, Geary, A. & al  
National Disparities in Covid-19 Outcomes between Black and White Americans  
Journal Of the National Med Association, 113 (2), 125-132 (2021)

- ❑ A total of 124,780 cases were analyzed with Black individuals making up 38.7% of the cases Blacks (mostly female 54.8%) were younger than Whites but had
  - ❑ Higher comorbidities (31.6 % vs 26.2%)
  - ❑ Higher # hospital admissions (37.7% vs 26.2%)
  - ❑ Higher # of ICU admissions (5.7% vs 4.2%)
  - ❑ Higher need for ventilator support (4.1% vs 3.1%)
  - ❑ 1.29 higher risk of death (95% CI 1.25, 1.33, p<0.001)
  - ❑ 1.36 higher risk of death (95% CI 1.32, 1.39, p<0.001) after controlling for sex, age & comorbidities



Millet, G.A., Jones, A.T & al  
Assessing differential impacts of Covid-19 on black communities  
Ann Epidemiol, 47, 37-44 (2020)

- ❑ Higher rates of Covid-19 infections and deaths in areas with large minority population.
- ❑ Over half of National Covid-19 diagnoses and deaths could be attributed to 22% of US counties which also happen to house a disproportionate share of black residents.

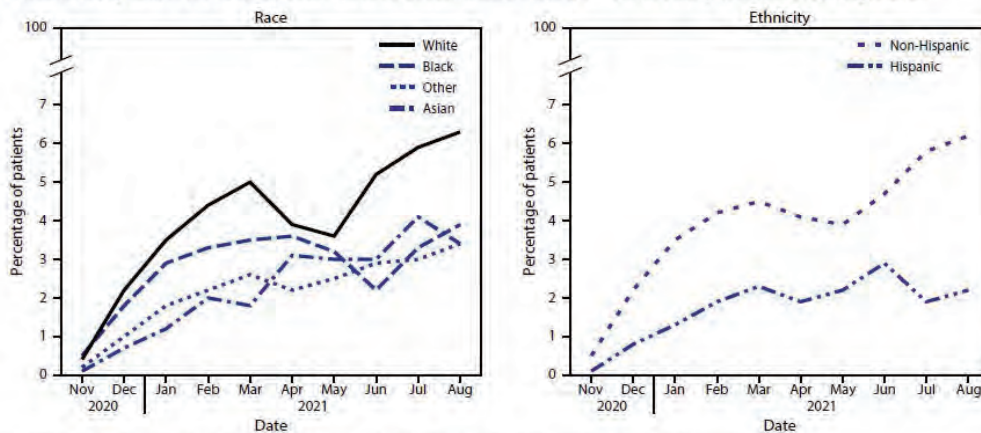
Racial & Ethnic Disparities in Heart & Cerebrovascular Disease Deaths during the Covid-19 Pandemic in the US (Circulation 2021)



## Racial disparities in Covid-19 pandemic cases, hospitalizations and death: A systemic review & meta-analysis (Journal of global health 2021)

## Wiltz, JI, Feehan, AK, & al. Racial and Ethnic Disparities in Receipt of Medications for Treatment of Covid-19 – US March 2020- August 2021 MMWR 71(3), Jan 21, 2022

FIGURE. Monthly\* percentage of COVID-19 patients (n = 805,276) receiving monoclonal antibody treatment,<sup>†</sup> by race<sup>§</sup> and ethnicity<sup>¶</sup> — 41 health care systems in the National Patient-Centered Clinical Research Network — United States, November 2020–August 2021



\* Systematic temporal differences in medication receipt by race and ethnicity were assessed by pairwise Wilcoxon signed rank test.

<sup>†</sup> mAbs require administration by intravenous infusion or subcutaneous injection.

<sup>§</sup> White race is the referent group; p-values for Black, Asian, and Other races are 0.004, 0.002, and 0.002, respectively.

<sup>¶</sup> Non-Hispanic ethnicity is the referent group; p = 0.002 for Hispanic ethnicity.





### Summary

What is already known about this topic?

Racial and ethnic disparities in SARS-CoV-2 infection risk and death from COVID-19 have been well documented.

What is added by this report?

Analysis of data from 41 health care systems participating in the PCORnet, the National Patient-Centered Clinical Research Network, found lower use of monoclonal antibody treatment among Black, Asian, and Other race and Hispanic patients with positive SARS-CoV-2 test results, relative to White and non-Hispanic patients. Racial and ethnic differences were smaller for inpatient administration of remdesivir and dexamethasone.

What are the implications for public health practice?

Equitable receipt of COVID-19 treatments by race and ethnicity along with vaccines and other prevention practices are essential to reduce inequities in severe COVID-19-associated illness and death.

## Covid-19 Prevention

### General Preventive measures

- Face Covering
- Covering of Coughs & Sneezes
- Maintaining 6 feet distance from others
- Frequent Handwashing

### Vaccination

- Most effective way to prevent severe infection & death
- However, only 78% of the US population have received at least one dose of Covid-19 vaccination as of July 11, 2022





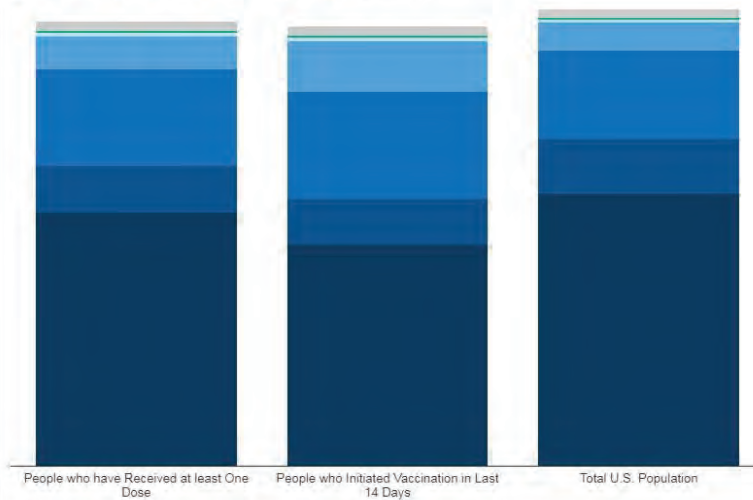
## Vaccines

Vaccination is the most effective way to prevent SARS-CoV-2 infection. The COVID-19 Treatment Guidelines Panel (the Panel) recommends COVID-19 vaccination as soon as possible for everyone who is eligible according to CDC's Advisory Committee on Immunization Practices (AI). Three vaccines are authorized or approved for use in the United States to prevent COVID-19. For primary and booster vaccinations, the mRNA vaccines (i.e., BNT162b2 [Pfizer-BioNTech] or mRNA-1273 [Moderna]) are preferable to the Ad26.COV2.S (Johnson & Johnson/Janssen) vaccine due to its risk of serious adverse events.<sup>4</sup> A primary series of COVID-19 vaccinations is recommended for everyone aged  $\geq 5$  years in the United States. Everyone aged  $\geq 12$  years should also receive a booster dose at least 5 months after completion of the primary series of an mRNA vaccine (BNT162b2 or mRNA-1273) or at least 2 months after receipt of the primary, single-dose Ad26.COV2.S vaccine.<sup>5</sup> The type and dose of vaccine and the timing of the primary and booster vaccinations depend on the recipient's age and underlying medical conditions. CDC regularly updates the clinical considerations for use of the COVID-19 vaccines currently approved by the Food and Drug Administration (FDA) or authorized for use in the United States.<sup>6</sup>

Figure 1  
Race/Ethnicity of People Receiving a COVID-19 Vaccine in the U.S. as of July 6, 2022

Click on the buttons below to see data for the different vaccine doses:  
[At Least One Dose](#) [Booster Dose](#)

■ White ■ Black ■ Hispanic ■ Asian ■ AIAN ■ NHOPI ■ Other



NOTE: AIAN refers to American Indian or Alaska Native. NHOPI refers to Native Hawaiian or Other Pacific Islander. Persons of Hispanic origin may be of any race but are categorized as Hispanic; other groups are non-Hispanic. Other race includes multiple race individuals. Totals may not sum to 100 due to rounding. Percent of people who have received at least one dose, who initiated vaccination in last 14 days, and percent of people who received an additional/booster dose all sum to less than 100 (96%, 95%, and 97% respectively).

SOURCE: Centers for Disease Control and Prevention. Demographic Characteristics of People Receiving COVID-19 Vaccinations in the United States, data accessed on July 13, 2022. • PNG

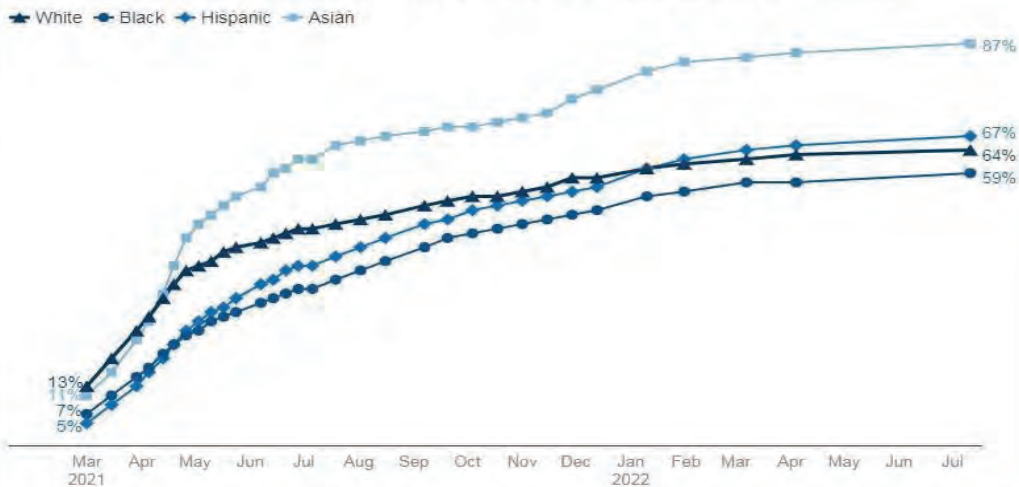
KFF



Across the 36 states for which a total vaccination rate could be calculated by race/ethnicity as of July 11, 2022, 87% of Asian, 67% of Hispanic, and 64% of White people had received at least one COVID-19 vaccine dose, higher than the rate for Black people (59%). ~~Hispanic people had a similar or higher~~

Figure 2

### Percent of Total Population that Has Received at Least One COVID-19 Vaccine Dose by Race/Ethnicity, March 1, 2021 to July 11, 2022



SOURCE: Vaccination data based on KFF analysis of publicly available data on state websites; total population data used to calculate rates based on KFF analysis of 2019 American Community Survey data. Number of states included in analysis varies based on available data at time of data collection. \* PNG



## Pre-Exposure Prophylaxis

### Anti-SARS-CoV-2 Monoclonal Antibodies

Vaccination remains the most effective way to prevent SARS-CoV-2 infection and should be considered the first line of prevention. However, some individuals cannot or may not mount an adequate protective response to COVID-19 vaccines. Other individuals may not have been fully vaccinated because of a documented history of a severe adverse reaction to a COVID-19 vaccine or its components.

Based on the results of PROVENT, a large randomized controlled trial (ClinicalTrials.gov Identifier [NCT04625725](https://clinicaltrials.gov/ct2/show/study/NCT04625725)), the FDA issued an Emergency Use Authorization (EUA) for the anti-SARS-CoV-2 monoclonal antibodies (mAbs) tixagevimab plus cilgavimab (Evusheld) as pre-exposure prophylaxis (PrEP) for certain individuals at high risk of progressing to severe COVID-19 if they become infected with SARS-CoV-2.<sup>21</sup> A modification in the fragment crystallizable (Fc) region gives these anti-SARS-CoV-2 mAbs prolonged half-lives; resulting in potential protection from SARS-CoV-2 infection for up to 6 months. This combination of mAbs appears to have activity against the B.1.617.2 (Delta) variant. Although preliminary in vitro data suggests the B.1.1.529 (Omicron) variant remains susceptible to this combination, more data are needed to fully assess the activity and efficacy of this regimen in situations where the Omicron variant is circulating at high levels.<sup>22</sup>





### Recommendations

- The Panel recommends using **tixagevimab 150 mg plus cilgavimab 150 mg**, administered as 2 consecutive 1.5 mL intramuscular (IM) injections, as SARS-CoV-2 PrEP for adults and adolescents (aged  $\geq 12$  years and weighing  $\geq 40$  kg) who do not have SARS-CoV-2 infection, who have not been recently exposed to an individual with SARS-CoV-2 infection, **AND** who:
  - Are moderately to severely immunocompromised and may have inadequate immune response to COVID-19 vaccination (**BIIa**), or
  - Are not able to be fully vaccinated with any available COVID-19 vaccines due to a documented history of severe adverse reaction to a COVID-19 vaccine or any of its components (**AIIa**).
- **Tixagevimab plus cilgavimab is not a substitute for COVID-19 vaccination and should not be used in unvaccinated individuals for whom COVID-19 vaccination is recommended and who are anticipated to have an adequate response.**

Figure 1. Therapeutic Management of Nonhospitalized Adults With COVID-19

PATIENT DISPOSITION	PANEL'S RECOMMENDATIONS
Does Not Require Hospitalization or Supplemental Oxygen	All patients should be offered symptomatic management ( <b>AIII</b> ). For patients who are at high risk of progressing to severe COVID-19* (treatments are listed in order of preference based on efficacy and convenience of use): <ul style="list-style-type: none"><li>• Ritonavir-boosted nirmatrelvir</li><li>• Sotrovimab<sup>†</sup> (<b>AIIa</b>)</li><li>• Remdesivir<sup>†,‡</sup> (<b>BIIa</b>)</li><li>• Molnupiravir<sup>†,§</sup> (<b>CIIa</b>)</li></ul> The Panel <b>recommends against</b> the use of <b>dexamethasone</b> or <b>other systemic corticosteroids</b> in the absence of another indication ( <b>AIII</b> ). <sup>¶</sup>
Discharged From Hospital Inpatient Setting in Stable Condition and Does Not Require Supplemental Oxygen	The Panel <b>recommends against</b> continuing the use of <b>remdesivir</b> ( <b>AIIa</b> ), <b>dexamethasone</b> <sup>¶</sup> ( <b>AIIa</b> ), or <b>baricitinib</b> <sup>¶</sup> ( <b>AIIa</b> ) after hospital discharge.
Discharged From Hospital Inpatient Setting and Requires Supplemental Oxygen <i>For those who are stable enough for discharge but who still require oxygen<sup>¶</sup></i>	There is insufficient evidence to recommend either for or against the continued use of remdesivir or dexamethasone.
Discharged From ED Despite New or Increasing Need for Supplemental Oxygen <i>When hospital resources are limited, inpatient admission is not possible, and close follow-up is ensured</i>	The Panel recommends using <b>dexamethasone</b> 6 mg PO once daily for the duration of supplemental oxygen (dexamethasone use <b>should not</b> exceed 10 days) with careful monitoring for AEs ( <b>BIII</b> ). Since remdesivir is recommended for patients with similar oxygen needs who are hospitalized, <sup>†</sup> clinicians may consider using it in this setting. Given that remdesivir requires IV infusions for up to 5 consecutive days, there may be logistical constraints to administering remdesivir in the outpatient setting.

**Rating of Recommendations:** A = Strong; B = Moderate; C = Optional  
**Rating of Evidence:** I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion



Disease Severity	Recommendations for Antiviral or Immunomodulator Therapy	Recommendations for Anticoagulation Therapy
Hospitalized but Does Not Require Supplemental Oxygen	The Panel <b>recommends against</b> the use of <b>dexamethasone (AIIa)</b> or <b>other corticosteroids (AIII)</b> . <sup>a</sup> There is insufficient evidence to recommend either for or against the routine use of remdesivir. For patients who are at high risk of disease progression, remdesivir may be appropriate.	For patients without evidence of VTE: • <b>Prophylactic dose</b> of heparin, unless contraindicated ( <b>AI</b> )
Hospitalized and Requires Supplemental Oxygen	Use 1 of the following options: • <b>Remdesivir<sup>a,c</sup></b> (e.g., for patients who require minimal supplemental oxygen) ( <b>BIIa</b> ) • <b>Dexamethasone plus remdesivir<sup>a,c</sup></b> ( <b>BIIb</b> ) • <b>Dexamethasone (B)</b> For patients on dexamethasone with rapidly increasing oxygen needs and systemic inflammation, add a second immunomodulatory drug <sup>a</sup> (e.g., <b>baricitinib<sup>a</sup></b> or <b>tocilizumab<sup>a</sup></b> ) ( <b>CIIa</b> ).	For nonpregnant patients with D-dimer levels >ULN who are not at increased bleeding risk: <sup>f</sup> • <b>Therapeutic dose</b> of heparin <sup>g</sup> ( <b>CIIa</b> ) For other patients: • <b>Prophylactic dose</b> of heparin, <sup>g</sup> unless contraindicated ( <b>AI</b> )
Hospitalized and Requires Oxygen Through a High-Flow Device or NIV	Use 1 of the following options: • <b>Dexamethasone (AI)</b> • <b>Dexamethasone plus remdesivir<sup>a</sup></b> ( <b>BII</b> ) For patients with rapidly increasing oxygen needs and systemic inflammation, add either <b>baricitinib<sup>a</sup></b> ( <b>BIIa</b> ) or <b>IV tocilizumab<sup>a</sup></b> ( <b>BIIa</b> ) to 1 of the options above. <sup>4h</sup>	For patients without evidence of VTE: • <b>Prophylactic dose</b> of heparin, <sup>g</sup> unless contraindicated ( <b>AI</b> )
Hospitalized and Requires MV or ECMO	<b>Dexamethasone<sup>i</sup> (AI)</b> For patients who are within 24 hours of admission to the ICU: • <b>Dexamethasone plus IV tocilizumab (BIIa)</b> If IV tocilizumab is not available or not feasible to use, <b>IV sarilumab</b> can be used ( <b>BIIa</b> ).	For patients without evidence of VTE: • <b>Prophylactic dose</b> of heparin, <sup>g</sup> unless contraindicated ( <b>AI</b> ) If patient is started on therapeutic heparin before transfer to the ICU, switch to a <b>prophylactic dose</b> of heparin, unless there is a non-COVID-19 indication ( <b>BIII</b> ).

**Rating of Recommendations:** A = Strong; B = Moderate; C = Optional  
**Rating of Evidence:** I = One or more randomized trials without major limitations; IIa = Other randomized trials or subgroup analyses of randomized trials; IIb = Nonrandomized trials or observational cohort studies; III = Expert opinion

## Challenges for improving Health Care Inequities





The social determinants of health (SDH) are the non-medical factors that influence health outcomes.

- They are the conditions in which people are born, grow, work, live and age
- They are the wider set of forces & systems shaping the condition of life
  - Economic policies & systems, development agendas, social norms, social policies and political systems

Conclusion: In countries at all levels of income, health and illness follow a social gradient: the lower the socioeconomic position, the worse the health.

Figure 1  
Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

**Health Outcomes**  
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations





Covid-19 will likely cease to be a pandemic and become an endemic disease.

- ❑ Healthcare disparities & inequities will continue well beyond the Covid-19 pandemic.
- ❑ Optimistic View
  - Awareness of the of healthcare disparities & inequities brought on by the Covid-19 pandemic will likely lead to changes in policies with improved outcomes.
- ❑ Healthcare Providers: Good patient advocates, good patient educators

“Dr. Paul Farmer had a vision of trying to start a movement to bring an end to Health Care Inequities in the World.” - Tracy Kidder

“Medicine should be viewed as Social Justice Work in a world that is so sick and so riven by Inequities.” - Paul Farmer, MD



# COVID-19

## KNOW YOUR RISK

If you have no symptoms...

HAD PROLONGED CLOSE CONTACT WITH SOMEONE POSITIVE FOR COVID-19

**HIGH**

\*SELF-QUARANTINE & MONITOR

TRAVELED INTERNATIONALLY TO A COUNTRY UNDER CDC LEVEL 3

**MEDIUM**

\*SELF-QUARANTINE & MONITOR

TRAVELED DOMESTICALLY TO AN AREA WITH KNOWN COMMUNITY-SPREAD

**MEDIUM**

\*SELF-OBSERVATION

SPENT TIME INDOORS (NO CLOSE CONTACT) WITH SOMEONE POSITIVE FOR COVID-19

**LOW**

\*SELF-OBSERVATION

Thank You  
Questions?



## Contact Information

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## Health Disparities in Cancer Care: The Caribbean Population

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Kristina Gowin, DO  
Department of Hematology Oncology  
University of Arizona, Tucson

September 9, 2022



A Cancer Center Designated by the  
National Cancer Institute

No Conflicts of  
Interest to Disclose

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## Objectives

- To explore cancer health disparities in the Caribbean population.
- To understand drivers of cancer health disparities in the Caribbean population.
- To discuss recommendations for cancer control in the Caribbean population.

## What are Cancer Health Disparities?

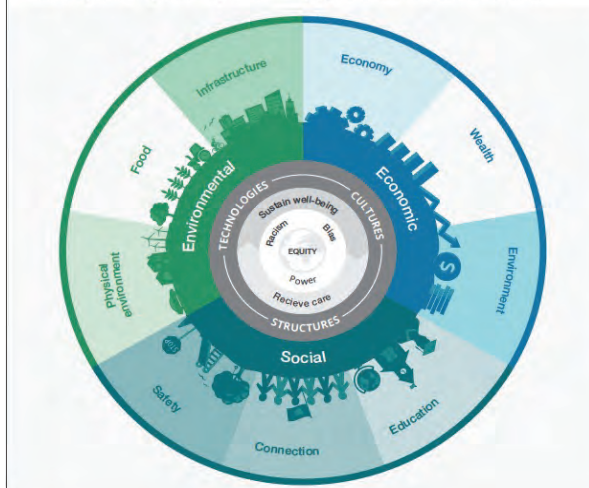
- Adverse differences in cancer burden experience by racial, ethnic minorities, and other medically underserved populations.
- Research has identified complex factors, such as socioeconomic, cultural, social, and environmental factors that influence disparities.





## Health Inequities Promoted by Non-Medical Drivers of Health

Health inequities are promoted predominantly by the non-medical drivers of health



Investing in Health Equity: Why Strong ESG Strategies Help Build a Healthier, More Inclusive World

### AACR CANCER DISPARITIES PROGRESS REPORT 2022

Achieving the Bold Vision of Health Equity for Racial and Ethnic Minorities and Other Underserved Populations

### American Association for Cancer Research

-Aims to increase the awareness of the progress in understanding and addressing disparities across the cancer care continuum.



## Cancer Control in Small Island Nations 3

### Cancer control in the Caribbean island countries and territories: some progress but the journey continues

*Dingle Spence, Rachel Dyer, Glennis Andall-Breton, Michael Barton, Susannah Stanway, M Austin Argentieri, Freddie Bray, Shamir Cawich, Sophia Edwards-Bennett, Christopher Fosker, Owen Gabriel, Natalie Greaves, Barrie Hanchard, James Hopedales, Silvana Luciani, Damali Martin, Marisa Nimrod, Camille Ragin, Donald Simeon, Guillermo Tortolero-Luna, Gillian Wharfe, Diana Sarfati*

[www.thelancet.com/oncology](http://www.thelancet.com/oncology) Vol 20 September 2019

## Cancer Control in the Caribbean Island Countries and Territories

- Cancer causes a fifth of deaths in the Caribbean region (2015)
- Incidence is increasing
- Cancer surveillance systems are poorly developed
- Advanced disease presentations are commonplace
- Access to cancer screening, diagnostics, and treatment is often suboptimal

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## The Caribbean Countries and Territories



Figure 1: Map of the Caribbean countries and territories

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## Human Infrastructural Resources

- More readily available in larger islands with disparities in resources seen in smaller and less affluent countries (Haiti, Guyana)
- Medical and nursing education well developed (80 medical schools, 32 nursing schools)

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## Commitment to Decrease Burden of Non-Communicable Disease

- Burden of Non-Communicable Disease (NCD) including Cancer is HIGH
- Commitment to decrease NCD is high
- The Caribbean region (CARICOM): Many initiatives in place for tobacco control, childhood obesity, healthy living beginning in 2007, however 2016 evaluation revealed little progress.
- RESPONSE: NCD policies are now widespread.

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Country	Cancer registration	National cancer plan or strategy plan was designed to cover	Current NCD plan	Prevalence of adult smokers (%)		Tobacco control measures (number of indicators in place)	Prevalence of overweight and obese adults (%)		Obesity prevention measures (number of indicators in place)	Hepatitis B virus vaccination coverage (%)		Human papillomavirus vaccination		Organised national screening programme present		
				Male	Female		Male	Female		Birth dose	Three paediatric doses	Year vaccine introduced <sup>a</sup>	Target age group (estimated coverage %)	Cervical cancer	Breast cancer	Bowel cancer
Anguilla	Registry activity	No	Yes	...	...	1-2	...	...	3-4	...	...	2016	9-year-old girls (57%) <sup>b</sup>	No	No	No
Antigua and Barbuda	Registry activity	No	Yes	...	...	3-2	40.1%	55.6%	3-4	...	95%	2018	9-13-year-old, both sexes <sup>c</sup>	No	No	No
Aruba	Registry activity	No	No	...	...	...	...	...	...	...	...	2014	9-year-old girls <sup>b</sup>	No	Yes (mammogram)	No
The Bahamas	Registry activity	No	Yes	20.4%	3.3%	3-2	60.3%	68.3%	1-2	...	90%	2015	9-12-year-old, both sexes <sup>c</sup>	No	No	No
Barbados	National high-quality FPCR	No	Yes	14.5%	1.5%	3-4	44.7%	59.9%	5	...	55%	2014	10-11-year-old, both sexes (>50%) <sup>b</sup>	No	No	No
Belize	Registry activity (2013-19)	Yes	Yes	...	...	3-2	48.1%	61.2%	3-4	55%	96%	2016	9-13-year-old girls <sup>b</sup>	No	No	No
Bermuda	National high-quality FPCR	No	No	...	...	3-4	79.1%	69.6%	3-4	...	...	2007	-	No	No	No
Bonaire	No registry activity	No	No	...	...	...	...	...	...	...	...	2015	-	No	No	No
British Virgin Islands	No registry activity	No	Yes	...	...	3-4	...	...	None	...	...	-	Vaccine not available	No	No	No
Cayman Islands	Registry activity	No	No	...	...	3-4	...	...	1-2	...	...	2009	-	No	No	No
Curaçao	FPCR (currently inactive)	No	No	20.4%	8.3%	3-4	63.1%	67.0%	...	...	...	-	Vaccine not available	No	No	No
Dominica	No registry activity	No	Yes	...	...	3-4	54.7%	67.7%	3-4	46%	94%	-	Vaccine not available	No	No	No
Dominican Republic	Registry activity	No	Yes	19.3%	8.5%	3-2	58.9%	65.3%	...	80%	92%	2017	9-year-old girls <sup>b</sup>	No	No	No
Grenada	Registry activity	No	Yes	...	...	3-2	43.7%	58.8%	3-4	95%	95%	-	Vaccine not available (planned introduction November 2019)	No	No	No
Guadeloupe	FPCR (2014-19)	Yes	...	...	...	...	...	...	...	...	...	2008	11-year-old girls <sup>b</sup>	No	Yes (mammogram)	Yes (fecal occult blood)
Guyana	FPCR	No	Yes	...	...	3-4	43.5%	56.6%	3-4	...	93%	2012	10-13-year-old girls (10-50%) <sup>b</sup>	-	-	-
Haiti	Registry activity	No	...	23.1%	2.9%	None	51.1%	58.3%	...	...	75%	-	Vaccine not available	No	No	No

(Table 2 continues on next page)  
www.thelancet.com/oncology Vol 20 September 2019



## Cancer Surveillance and Epidemiology

- Cancer is the second leading cause of death after cardiovascular disease.
- Prostate Cancer and Breast Cancer are most common cancer types.
- Mortality from prostate and breast in several Caribbean countries is among the highest in the world.

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### Cancer Incidence and the Caribbean Population

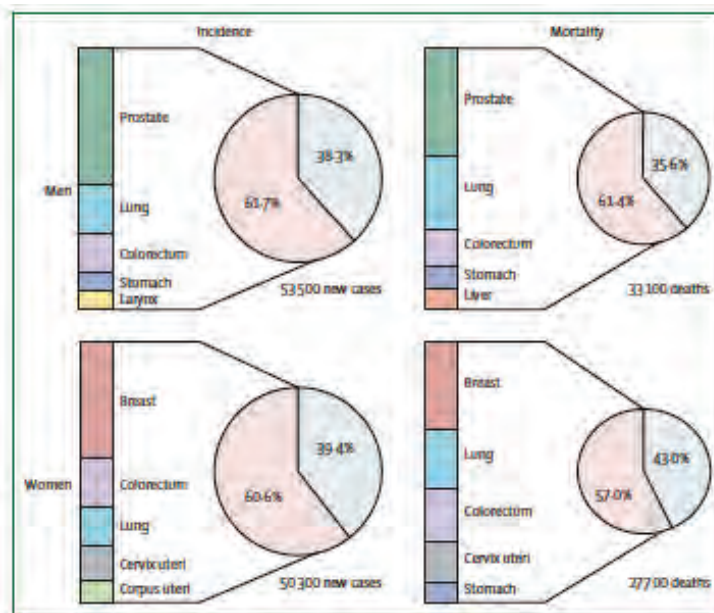


Figure 2: The contribution of the top five cancers to cancer incidence and mortality by sex<sup>10</sup>

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## Immunization and Screening

### Success

- Hep B/C prevention led to reductions in liver cancer
- Hep B vaccination in infants more than 90% in all countries except Haiti (79%)
- HPV vaccine campaigns in effect

### Challenge

- Poor awareness
- Geographical inaccessibility
- Fear
- Traditional beliefs

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## Cancer Diagnosis

- Caribbean states well served with basic diagnostic services.
- Specialized services less common (CT, MRI, NM).
- Timely and comprehensive histopath is difficult due to poor infrastructure, insufficient supplies and trained personnel.
- Standard of care compromised- lacking ancillary IHC and genetic testing.

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## Cancer Treatment

- Generally provided by cancer specialists.
- Difficult to train or attract specialists.
- Regional approach is limited by geographical separation and different policies.
- Financial hardship is not unusual for patients.
- Overburdened systems struggle to provide quality and timely care.
- WHO note 80% of low-income countries use traditional medicine

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Publicly available diagnostic services			
	Pathology	Radiology	Number of specialist diagnostic staff
Angola	Not available on island	x-ray, ultrasonography, mammogram, and CT	No pathologists; 3 radiologists
Antigua and Barbuda	Histology and cytology	x-ray, ultrasonography, mammogram, and CT	...
Aruba	Histology and cytology	...	3 pathologists; 4 radiologists
The Bahamas	Histology and cytology	x-ray, ultrasonography, mammogram, and CT (private MRI and nuclear medicine)	No pathologists; 2 radiologists
Barbados	Histology and cytology	x-ray, ultrasonography, mammogram, and CT (private MRI and nuclear medicine)	5 pathologists; 12 radiologists
Belize	Histology and cytology	...	2 pathologists
Bermuda	Histology and cytology	x-ray, ultrasonography, mammogram, CT, and MRI	2 pathologists; 4 radiologists
Bonaire	Not available on island	x-ray, ultrasonography, and CT	1 radiologist
British Virgin Islands	Histology and cytology	x-ray, ultrasonography, mammogram, and CT (private MRI)	...
Cayman Islands	Histology, cytology, and immunohistochemistry	x-ray, ultrasonography, mammogram, CT, and MRI (private nuclear medicine)	1 pathologist; 3 radiologists
Curaçao	Histology, cytology, and immunohistochemistry	x-ray, ultrasonography, mammogram, CT, and MRI	2 pathologists; 3 radiologists
Dominica	..	x-ray, ultrasonography, mammogram, and CT	...
Dominican Republic	..	..	..
Grenada	Histology and cytology	x-ray, ultrasonography, and mammogram (private CT and MRI)	1 pathologist; 1 radiologist
Guadeloupe	Histology and cytology	x-ray, ultrasonography, mammogram, CT, MRI, and nuclear medicine	8 pathologists; more than 30 radiologists
Guyana	..	..	..
Haiti	Histology and cytology	x-ray, ultrasonography, mammogram, and CT	14 pathologists; 19 radiologists
Jamaica	Histology, cytology, and immunohistochemistry	x-ray, ultrasonography, mammogram, CT, and MRI	21 pathologists; many radiologists

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Operational cancer unit	Publicly available cancer treatment and palliative care						Formal palliative care services available		Oral morphine available in primary care or public health sector
	Chemotherapy	Number of medical oncologists	Radiotherapy	Number of radiotherapy centres	Number of radiation oncologists	Cancer surgery			
Anguilla	No	None	No	None	None	Little	No	Yes	
Antigua and Barbuda	No (1 private facility)	5	Yes	1	..	Yes	Yes	Yes	
Aruba	Yes	1	No	None	None	Yes	..	..	
Bahamas	No (1 private facility)	2	Yes	1	..	Yes	Yes	Yes	
Barbados	No	4	Yes	1	2	Yes	Yes	Yes*	
Belize	Yes	1	No	None	None	Yes	Yes	Yes	
Bermuda	Yes	2	Yes	1	1	Yes	Yes	Yes	
Bonaire	No	None	No	None	None	Little	Yes	..	
Britain Virgin Islands	No	1 (visiting)	No	None	None	Little	..	..	
Cayman Islands	Yes	1	No	None	None	Yes	Yes	Yes	
Cuba	No	3	Yes	1	2	Yes	Yes	Yes	
Curaçao	No	1	No	None	1	..	..	..	
Dominican Republic	Yes	..	Yes	12	26	..	Yes	Yes*	
Guadeloupe	No	2	No	None	None	..	No	..	
Guatemala	..	2	Yes	1	5	Yes	Yes	..	
Guyana	..	..	Yes	1	..	..	..	..	
Haiti	Yes	4	No	None	None	Yes	No	No	
Jamaica	Yes	15	Yes	4	..	..	..	..	

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# Recommendations for Cancer Control in Caribbean Region

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# 1. Policy and Planning

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# 2. Expanding Systems for Cancer Intelligence

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### 3. Improving Risk Reduction, Cancer Prevention, and Early Diagnosis

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### 4. Providing Access to Quality Treatment for Cancer

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## 5. Expanding Existing Research Networks

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## 6. Building Capacity of Palliative Care

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Ruano et al. *International Journal for Equity in Health* (2021) 20:94  
<https://doi.org/10.1186/s12939-021-01426-1>

International Journal for  
Equity in Health

EDITORIAL

Open Access

## Understanding inequities in health and health systems in Latin America and the Caribbean: a thematic series



Ana Lorena Ruano<sup>1,2\*</sup>, Daniela Rodríguez<sup>3</sup>, Pablo Gaitán Rossi<sup>4</sup> and Daniel Maceira<sup>5</sup>

**Key Remaining Gaps in the Caribbean:** consequences of dictatorial and authoritarian regimes civil wars, organized crimes, and militia groups on health outcomes, government social contracts with underserved populations.

## Summary

- Health disparities in the Caribbean population are high
- Multiple factors contribute to ongoing disparities
- Recent progress in cancer prevention brings hope
- While multiple barriers exist, future recommendations will guide continued progress.



**THANK YOU!**



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# Post-acute “Long” COVID-19 Syndrome: Risk Factors, Mechanisms and Mitigations in Minority Populations

Celia J. Maxwell M.D., FACP, FIDSA  
Associate Dean for Research &  
Professor of Medicine  
Howard University College of Medicine

## Purpose and Objectives

### PURPOSE

*Address the potential long-term effects of SARS Cov-2 infections.*

### OBJECTIVES

- To identify predisposing factors for long COVID Syndrome
- To understand why women seem more predisposed to the Syndrome than men
- To address mitigating factors in the management of the Syndrome

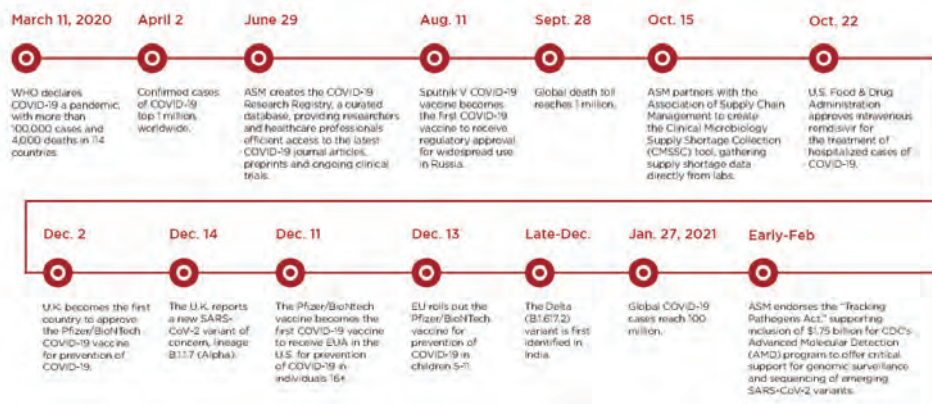
### FINANCIAL DISCLOSURE

*No disclosures to make*



## Agenda

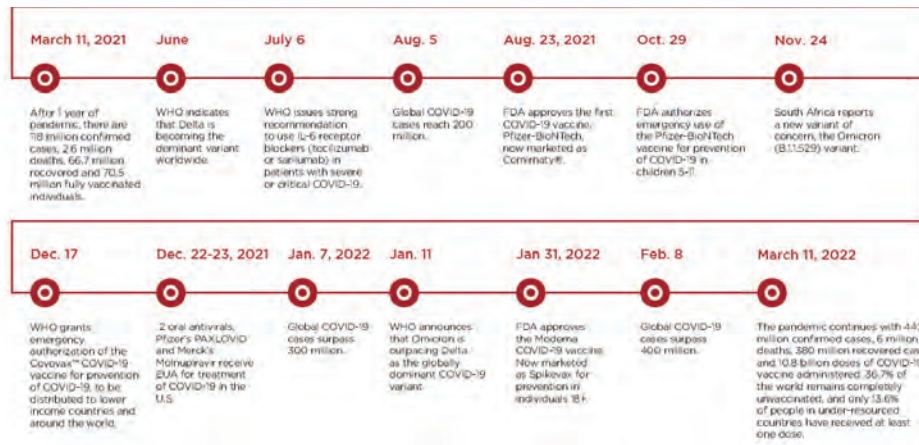
- SARS-CoV-2 (COVID-19) trans. timeline
- COVID-19 Clinical Manifestations
- Post Acute Sequela of SARS-CoV-2 (PASC) infection (Long COVID)
- PASC management/recovery
- Impact of COVID-19 on minority populations



## Covid Timeline

\* American Society For Microbiology





## Covid Timeline

\* American Society For Microbiology

**HF** HOWARD FORWARD 2019 - 2024

## SARS-CoV-2 COVID 19

- First cases in China 2019, sequencing novel corona virus with bat & pangolin genetic sequences
- ↑ACE2 receptors alveolar epith. & enterocytes of small Intestine
- Inhaled viral part. binds to ace 2 receptors airways/gut. Higher binding affinity than other coronaviruses ? Cause of ↑viral trans, disease severity

Science ;367(6483):1260-63 J Pathol 2004;203(2)631-7



## Covid-19: Clinical Manifestations

- **Asymptomatic Infection**
- **Clinical Manifestations**
  - Incubation period
  - Initial Presentation
  - Acute Course and Complications
  - Recovery and long-term sequelae
  - Reinfection

UpToDate 2021

## Clinical Manifestations

### Asymptomatic Infect.

- Estimates  $\approx$  50 % pts. test+, but asympt. at time of diagnosis
- More common in young, middle aged, women no co-morbidities
- Small # pts. Initially dx. as asympt. dvlp sxs within 48 hours



## Mild Disease

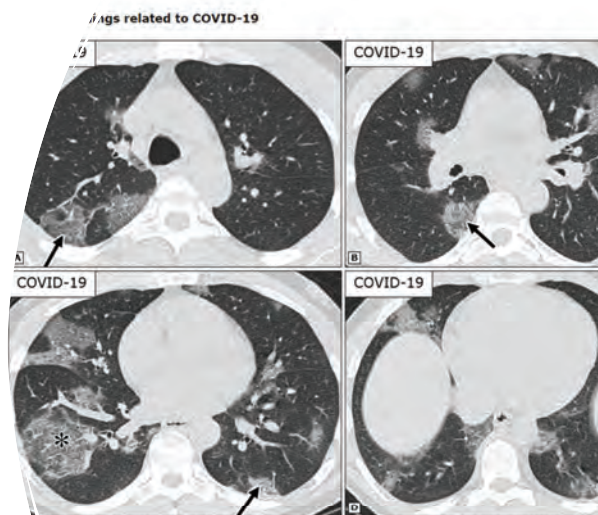
- Symptoms of fever, myalgia, sore throat malaise (No SOB, dysp. or abn. chest imaging)
- About 80% of infections results in mild disease
- Loss of taste or smell varies (10-40%), but often precedes flu like illness
- Etiol. Anosmia, ageusia ? But theory specialized cells in olfactory bulb & epithelium have ACE2 receptors

ID Clinics North America June 2022 vol.36 # 2

## Covid-19: Findings and Special Populations

- **Laboratory Findings**
- **Imaging Findings**
  - Chest radiographs
  - Chest CT
  - Lung Ultrasound
- **Special Populations**
  - Pregnant and breastfeeding women
  - Children
  - People with HIV

UpToDate 2021



CT imaging features for COVID-19. Unenhanced thin-section axial images of the lungs in a 52-year-old man with a positive COVID-19 PCR test. A, Bilateral, peripheral ground-glass opacities (arrows). B, Bilateral, rounded ground-glass opacities (asterisks). C, Bilateral, tubular lines ("crazy-paving") (asterisks). D, Bilateral, peripheral ground-glass opacities (arrows). Routine screening CT for diagnosis or exclusion of COVID-19 is currently not recommended by professional organizations or the United States Centers for Disease Control and Prevention.



## Post COVID Conditions (e.g. Long COVID)

### Definition

The World Health Organization has developed a **working clinical case definition of post-COVID conditions**: "Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, **usually 3 months from the onset of COVID-19 with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis**. Common symptoms include **fatigue, shortness of breath, cognitive dysfunction but also others which generally have an impact on everyday functioning**. Symptoms may be **new onset**, following initial recovery from an acute COVID-19 episode, or **persist from the initial illness**. Symptoms may also **fluctuate** or relapse over time. A **separate definition** may be applicable **for children**."

### Risk

**Type 2 Diabetes**  
**Reactivated Epstein-Barr virus**  
**Autoantibodies**

### Guidelines

Infectious Diseases Society of America April 2022

NIH News and Stories May 2022

## Post COVID Conditions (e.g. Long COVID)

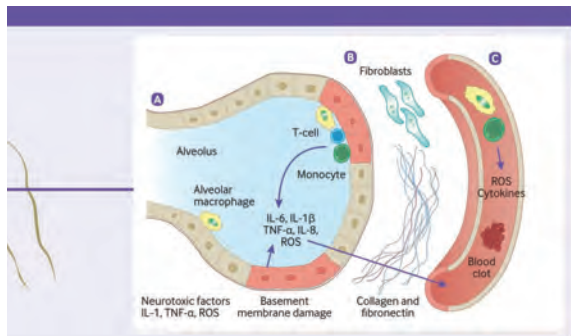
### • Clinical Manifestations

- Pulmonary
- Hemotologic
- Cardiovascular
- Neuropsychiatric
- Renal
- Endocrine
- Gastrointestinal and Hepatobiliary
- Dermatologic
- MIS-C

Nature Medicine, Vol 27, April 2021, 601-615



## Possible Long Covid Mechanisms: Lung



Long term sequelae of covid-19 In the alveoli of the lungs:

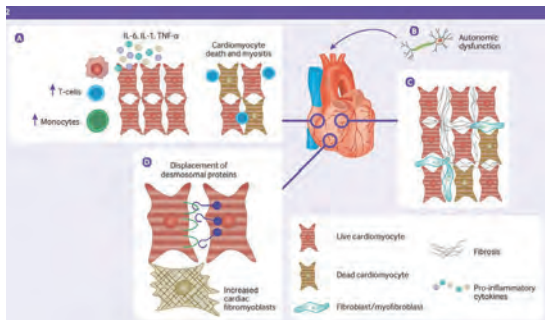
(A) Chronic inflammation results in the sustained production of pro-inflammatory cytokines and reactive oxygen species (ROS) which are released into the surrounding tissue and bloodstream.

(B) Endothelial damage triggers the activation of fibroblasts, which deposit collagen and fibronectin resulting in fibrotic changes.

(C) Endothelial injury, complement activation, platelet activation, and platelet-leukocyte interactions, release of pro-inflammatory cytokines, disruption of normal coagulant pathways, and hypoxia may result in the development of a prolonged hyperinflammatory and hypercoagulable state, increasing the risk of thrombosis.

BMJ Clinical Research July 2021 " Long covid-mechanisms, risk factors, and management

## Possible Long Covid Mechanisms: Heart



In the heart:

(A) chronic inflammation of cardiomyocytes can result in myositis and cause cardiomyocytes death.

(B) Dysfunction of the afferent autonomic nervous system can cause complications such as postural orthostatic tachycardia syndrome.

(C) Prolonged inflammation and cellular damage prompts fibroblasts to secrete extracellular matrix molecules and collagen, resulting in fibrosis.

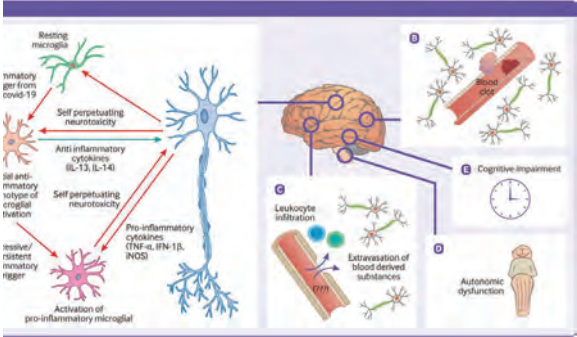
(D) Fibrotic changes are accompanied by an increase in cardiac fibrocytes, while damage to desmosomal proteins results in reduced cell-to-cell adhesion.

BMJ Clinical Research July 2021 " Long covid-mechanisms, risk factors, and management





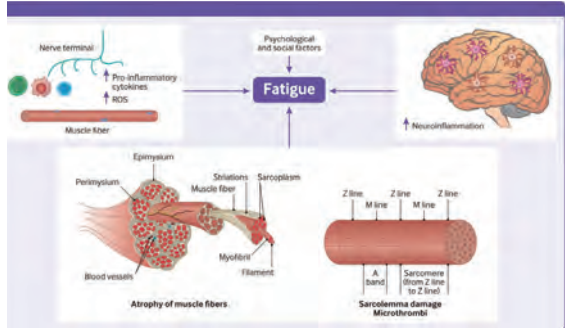
## Possible Long Covid Mechanisms: CNS



- In the central nervous system:
- (A) The long-term immune response activates glial cells which chronically damage neurons.
  - (B) Hyperinflammatory and hypercoagulable states lead to an increased risk of thrombotic events.
  - (C) Blood-brain barrier damage and dysregulation results in pathological permeability, allowing blood derived substances and leukocytes to infiltrate the brain parenchyma.
  - (D) Chronic inflammation in the brainstem may cause autonomic dysfunction.
  - (E) The effects of long covid in the brain can lead to cognitive impairment.

BMJ Clinical Research July 2021 " Long covid-mechanisms, risk factors, and management

## Possible Long Covid Mechanisms: Fatigue



Possible mechanisms causing post-covid-19 fatigue. A range of central, peripheral, and psychological factors may cause chronic fatigue in long covid. Chronic inflammation in the brain, as well as at the neuromuscular junctions, may result in long term fatigue. In skeletal muscle, sarcolemma damage and fiber atrophy and damage may play a role in fatigue, as might a number of psychological and social factors.

BMJ Clinical Research July 2021 " Long covid-mechanisms, risk factors, and management



## Impact of SARS-CoV-2 on minority populations

- Black and Brown pop. disproportionately impacted
- Health, economic and social disparities play major role (low wage but essential workers, uninsured or underinsured, lack of private transportation means etc.)

## Impact of Covid-19 on the Caribbean Population

- According to PAHO, more than 66% of the population of Latin America and the Caribbean had been fully vaccinated as of April 20, 2022.
- As of early May 2022, although nine LAC countries had fully vaccinated over 70% of their populations, four Caribbean countries—Haiti, Jamaica, St. Lucia, and St. Vincent and the Grenadines—had less than 30% fully vaccinated. Of these, the most concerning is Haiti, which had just over 1% of its population fully vaccinated.

Congressional Research Service Latin America and the Caribbean: Impact of COVID-19, 2022

**Table 1. COVID-19 Deaths, Mortality Rates, and Vaccinations in Latin American & Caribbean**  
(Countries with more than 1,000 deaths, as of May 3, 2022)

Country	Deaths	Deaths per 100,000	Fully Vaccinated (percentage)
Brazil	663,838	312.31	76.91
Mexico	324,350	253.81	62.56
Peru	212,865	645.60	80.99
Colombia	139,797	274.74	69.60
Argentina	128,653	284.66	82.28
Chile	57,541	301.01	91.29
Ecuador	35,598	201.77	78.55
Bolivia	21,923	187.81	49.98
Paraguay	18,870	264.56	48.33
Guatemala	17,613	98.31	33.93
Honduras	10,893	109.98	48.82
Cuba	8,527	75.28	87.77
Costa Rica	8,405	164.99	80.18
Panama	8,185	189.70	70.84
Uruguay	7,203	207.36	82.34
Venezuela	5,709	20.08	50.24
Dom. Rep.	4,376	40.34	54.92
El Salvador	4,128	63.64	66.27
Trinidad & Tobago	3,833	273.89	50.81
Jamaica	2,967	100.20	23.11
Suriname	1,328	226.38	40.50
Guyana	1,228	156.12	46.25
<b>Total LAC</b>	<b>1,691,707</b>		

Sources: Johns Hopkins University School of Medicine, Coronavirus Resource Center; "Vaccination Progress Across the World," at <https://coronavirus.jhu.edu/vaccines/international>, and "Mortality Analysis," at <https://coronavirus.jhu.edu/data/mortality>, May 3, 2022.



## Impact of Covid-19 on the Caribbean Population

- As of May 3, 2022, the region had nearly 1.7 million deaths (over 27% of deaths worldwide). Brazil, Mexico, Peru, Colombia, and Argentina had the region's highest numbers of deaths. Looking at deaths per 100,000 people, Peru had the highest recorded COVID-19 mortality rate in the region, followed by Brazil, Chile, Argentina, Colombia, and Trinidad and Tobago.

Congressional Research Service Latin America and the Caribbean: Impact of COVID-19, 2022

## Impact of Covid-19 on the Caribbean Population

- Economic and Political Impact
  - The International Monetary Fund (IMF) reported a 7.0% economic contraction for Latin America and the Caribbean in 2020. Caribbean nations that depend on tourism had deep economic recessions, several with estimated economic declines over 13%. In 2021, many of the region's economies began modest recoveries, with the IMF estimating a regional growth rate of 6.8% and forecasting 2.5% regional growth in 2022. Nevertheless, many countries may struggle with protracted recoveries, given that they rely on global investment, trade, and tourism, all negatively affected by the pandemic. An important factor in the region's economic recovery is the course of the pandemic, including governments' responses and progress on fully vaccinating countries' populations.
- Political Impact
  - Even before the pandemic, public satisfaction with the quality of democracy in several Latin American and Caribbean countries was eroding. Several broad political and economic factors drove the decline and help explain the eruption of social protests in the region in 2019. Political factors include an increase in authoritarian practices, weak democratic institutions, politicized judicial systems, corruption, and high levels of crime and violence.

Congressional Research Service Latin America and the Caribbean: Impact of COVID-19, 2022



Thank You!





## The Consequences of Policy: Access to Kidney Transplantation

Health Disparities Impacting Global and Local Caribbean  
Populations

New Orleans, LA  
9 September, 2022

Devon G. John, MD, FACS  
Chief, Renal Transplantation  
Department of Surgery | Westchester Medical Center / New York Medical College  
Valhalla, NY 10595



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Westchester Medical Center Health Network

# Disclosure

Nothing to Disclose



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## Purpose and Objectives

### PURPOSE

*How National Policy Impacts Access to Kidney Transplantation*

### OBJECTIVES

- Problem: Disparities as a result of the initial allocation policies
- Identification and corrective actions taken
- Outcomes

### FINANCIAL DISCLOSURE

*Do you have a financial disclosure? (None) or (Include name)*



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## End Stage Renal Disease

- Incidence (rate per million population)
  - ✓ United States: 317
  - ✓ African American: 744
  - ✓ White: 252
- Prevalence (rate per million population)
  - ✓ African American: 3579
  - ✓ White: 803
  - ✓ AA represent 30% of ESRD patients
    - AA make up 13% of the US population
- UNOS Waitlist (AA) - 2001
  - ✓ 35% of National Wait list
  - ✓ 29% of new additions



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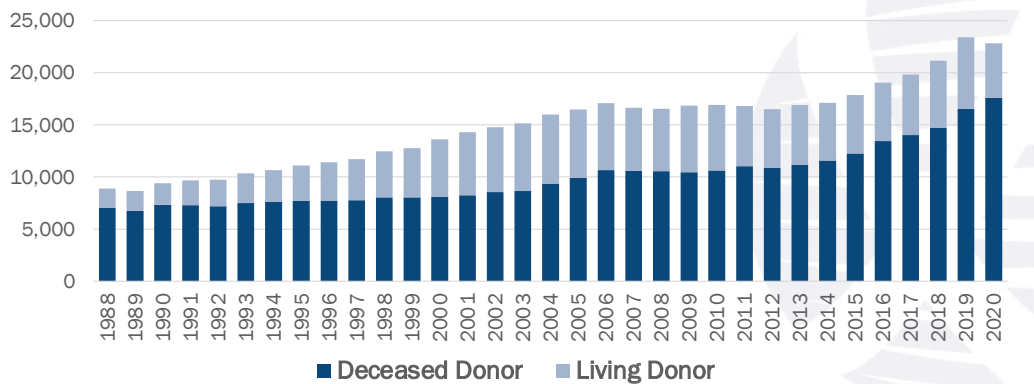


## Rationale

- Kidney Transplantation vs Dialysis
  - Superior survival and quality of life
  - Economically superior
  - Best therapy for eligible candidates
- Social Security Amendments of 1972
  - ✓ Entitles all people of the US with ESRD to Medicare-funded dialysis or Transplantation
  - ✓ **Implicitly guarantees equal access to optimal treatment**

Rettig and Levinsky. *Kidney Failure and the Federal Government*. Washington DC Nat. Academy Press, 1991

## OPTN: National Kidney Transplant Volume





## OPTN: Organ Procurement and Transplantation Network

- National Organ Transplantation Act -1984
  - ✓ OPTN (HHS)
- Contracted to United Network for Organ Sharing (UNOS) -1988
  - ✓ National regulatory agency for organ allocation and candidate registration
  - ✓ Policy and procedures
  - ✓ Data collection – outcomes



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Westchester  
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Westchester Medical Center Health Network

## Allocation Policy Key Points (1988)

- Wait time = Date listed
- Blood type compatibility over ABO specificity
- CKD stage 4 eligibility -  $GFR \leq 20\text{mL}/\text{min}$
- Scaled HLA matching priority
- Points granted to  $PRA > 80\%$
- Geographically based deceased donor allocation



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## Renal Transplantation: Challenges

- African Americans:
  - ✓ Less likely to be referred
  - ✓ less likely to be identified as a transplant candidate
  - ✓ Less likely to appear on the transplant waiting list
  - ✓ Black patients with ESRD are 24% less likely to receive a kidney transplant when compared to whites

- JAMA 2000; 283:2445
- Kidney Int. 1996; 50:235
- Am J. of Kid Dis 1994; 24:59
- Young, C. *Med Clin N Am* 89 (2005) 1003-1031



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## Policy: Wait Time (1988)

- **The clock starts when listed**
- Eligibility: Starts at CKD 4;  $GFR \leq 20$  mL/min
  - ✓ AA 66% less likely than whites to receive a kidney transplant prior to placement on dialysis
  - ✓ Implied: AA more likely to be referred for transplantation after initiation of dialysis
  - ✓ Longer time on dialysis prior to coming up for a kidney
    - Associated with poorer outcomes

Semin Nephrol 2010 Jan; 30 (1): 81



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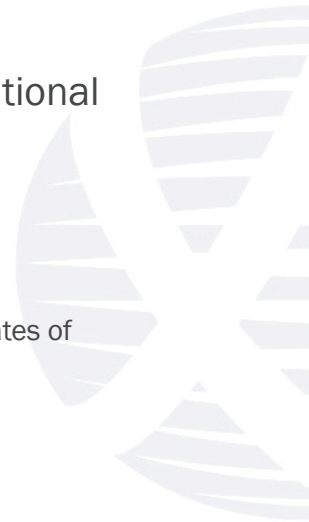


Department of Surgery  
Westchester  
Medical Center  
Westchester Medical Center Health Network

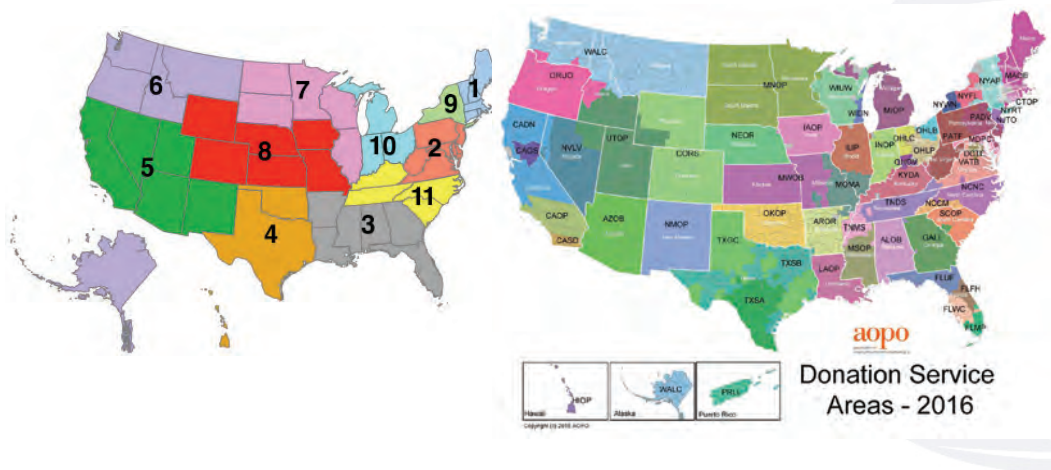


## Policy: Geographic Allocation

- Donor Service Area → Region → National
  - ✓ Donor service areas: 75
    - Variable populations
    - Variable geographic coverage area
    - Variable density of ESRD patients
    - Inconsistent rates of organ acquisition and rates of transplantation
  - ✓ Regions: 11



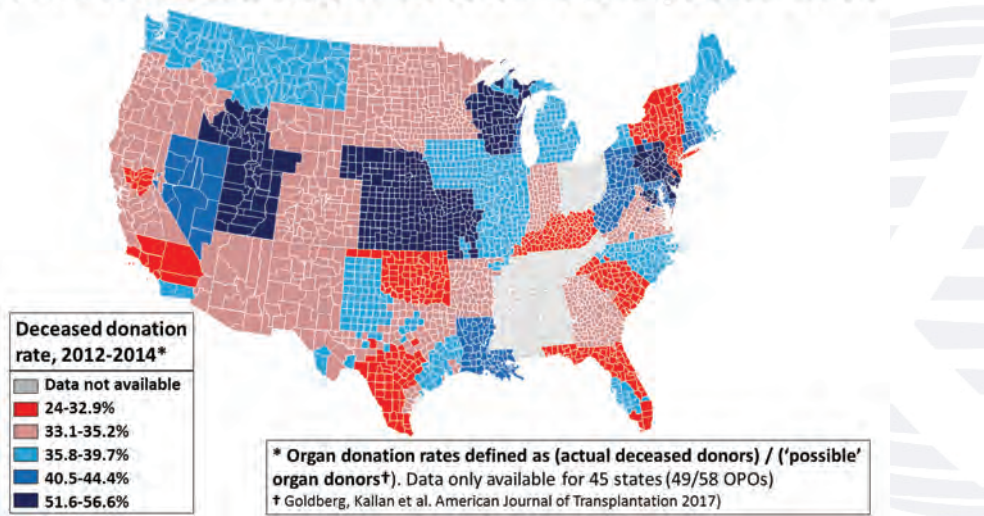
## UNOS Regions/DSA: Geographic Allocation



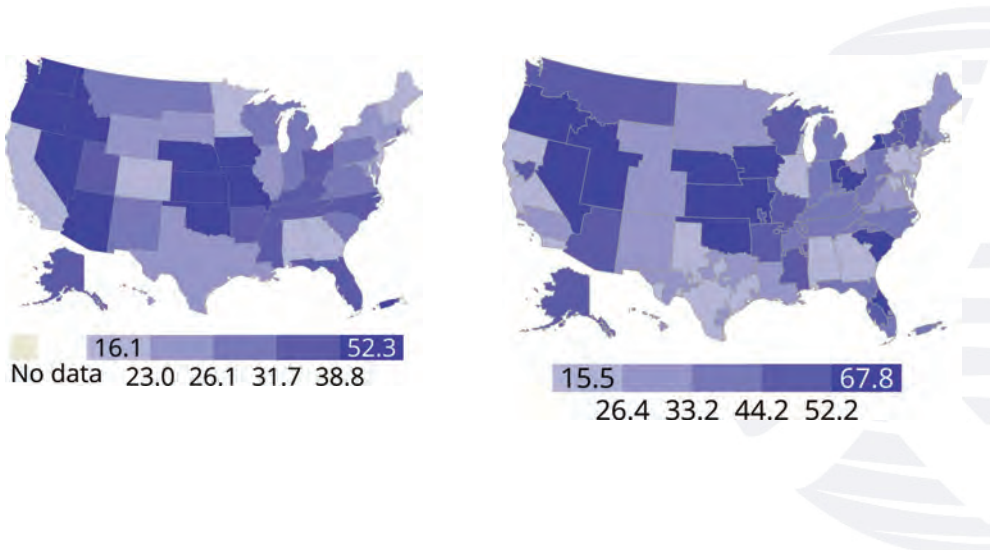




**Figure 3: Organ donation rates per donor service area using administrative data based on the denominator of 'potential donors'**



**OPTN/SRTR 2019 Annual Data Report: Percentage of adults who DDRT within 5 years of listing by State and DSA**





## Policy: EGFR

- GFR - degree of kidney function
- GFR  $\leq$  20 mL/min - qualifies for transplant listing
  - ✓ Measured GFR - gold standard
  - ✓ Complex collection
- eGFR surrogate based on serum creatinine
  - ✓ Assumptions for AA patients
    - Any given creatinine, eGFR is higher when compared to whites
    - Not necessarily accurate in self identified AA
    - Influenced by diet and body habitus (?)
  - ✓ AA - later referrals for transplant evaluation



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## CMS: Candidacy

- Multifaceted assessment - CMS Regulations
  - ✓ Physical, laboratory, imaging, physiological and psychosocial.
  - ✓ Undertaken by a multidisciplinary transplant team
    - coordinator, physician, surgeon, CSW, pharmacist, financial coordinator, other professionals as needed
    - Patient education and participation in the decision-making process



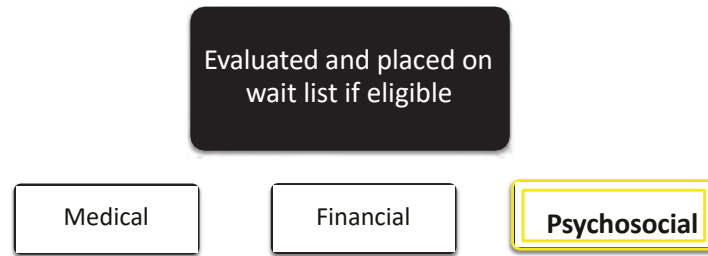
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## Candidacy Assessment



Black patients:<sup>1</sup>

- 12%-25% less likely to be listed for KT
- 70% less likely to resolve “inactive” status once listed as such (KT)

<sup>1</sup>Ng et al. 2020; Murphy et al. 2020; Jesse et al. 2019; Kulkarni et al. 2019; Zhang et al. 2018

<sup>1</sup>Ng et al. 2020; Jesse et al. 2019; Kemmer 2011

## Biological Barriers - 1988

- Policy: Blood type compatibility over specificity
  - ✓ O into
    - A/B/AB
  - ✓ A into
    - A/Ab
  - ✓ B into
    - B and AB
- Degree of HLA matching
  - ✓ Allocation based on the degree of mismatching.
  - ✓ 0 mismatches gets priority
  - ✓ 6 mismatches least priority



OPTN 2012



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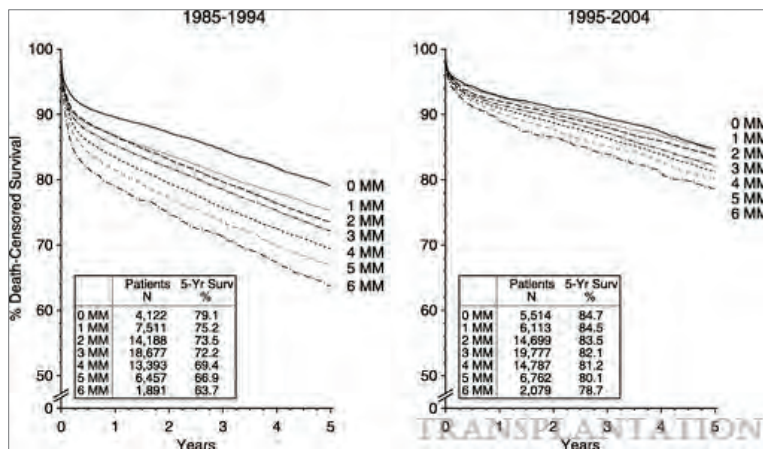
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## Blood Type

- Blacks are disadvantaged
  - ✓ Owing to a higher frequency of O and B blood groups
  - ✓ Differing from the predominantly white donor pool
    - Higher incidence of A blood type
  - ✓ Within each group
    - Type O - 53% longer
    - Type B - 60% longer

## HLA Matching



Opelz, Gerhard; Döhler, Bernd  
 Transplantation. 84(2):137-143, July 27, 2007.



## Biological

- Immunologic Variables
  - ABO Blood Type
    - » Higher incidence of O and B blood type in AA
  - African American HLA polymorphism
    - » Lesser degrees of matching
  - Pre-sensitization
    - Longer wait time on dialysis
      - » Greater likelihood of transfusion
    - Additional points *only* for the highly sensitized (80% and above)



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## Policy: HLA and Blood Type based Allocation

Population	Waitlist	CAD TXP	Median Wait Time
African Am.	35%	22%	1832 days
Whites	38%	60%	1310 days

OPTN 2001



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## Bleak

- Awareness
- Outcomes studies
- Years of Advocacy
  - ✓ UNOS Minority Affairs Committee
  - ✓ National meetings



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## HHS: Final Rule

- Implemented-March 2000 – Regulatory framework for OPTN operations and structure
  - ✓ Allocation
    - Should no longer favoring geographic proximity
    - DSA → Region → National
    - Prioritize patient need and thus broader sharing
  - ✓ Updated Regulations
  - ✓ UNOS, OPO's, Transplant Centers, Personnel, Monitoring, Oversight and Accountability, Risk of defunding



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## Policy Impact: Corrective Action

- CMS condition of participation (2007)
  - ✓ Required Referrals from dialysis centers
  - ✓ Transplant center-based outreach
  - ✓ Specific evaluation/educational requirements
    - Increased the rates of referrals
    - Narrowing the gap



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## UNOS Kidney Allocation Policy Changes: 2014

- Dialysis date starts the wait time clock for late referrals
  - ✓ Addresses inequity – late referrals and risks associated with dialysis vintage
- Sliding scale point system for sensitization
  - ✓ Priority for highly sensitize patients (>98%) – national sharing
- O into O; B into B
- Blood type A2 donors can be placed B recipients
  - ✓ Reduces wait time for B blood type
- Removal of HLA points
  - ✓ No national sharing for O mismatches
- Leveling of the playing field



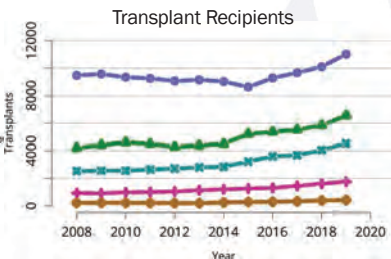
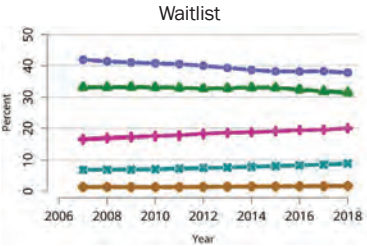
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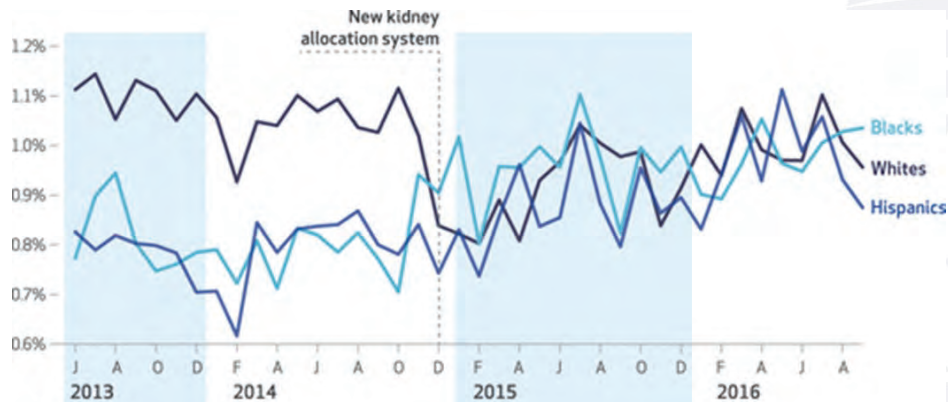


# OPTN/SRTR 2019 Annual Data Report: Kidney Candidates and Transplants by Race





## Deceased Donor Transplant Rates



New Kidney Allocation System Associated With Increased Rates Of Transplants Among Black And Hispanic Patients. [Taylor A Melanson et al. Health Aff \(Millwood\) 2017 Jun 1;36\(6\):1078-1085](#)

## Policy Impact: Geographic Disparity March 2021

- Removed Donor Service Area
- Kidney allocation system (KAS) distributes kidneys first within a 250-nautical miles (nm) circle that is centered on the donor hospital.
- Additional points are given on the basis of proximity of the recipient's transplant center to the donor.
- This approach improves system efficiency by prioritizing a recipient who is closer to the donor and therefore, reducing travel distances.
- Encourages broader sharing/normalizes wait time across broader areas
- Outcomes pending





## EGFR

- Inaccuracy noted
- 27 July 2022: Transplant hospitals **are now required** to use only race-neutral eGFR formulas
- Move to improved accuracy
  - ✓ Earlier referrals/ eligibility
    - Measured GFR
  - ✓ Cystatin C measurement in association with serum creatinine
    - not influenced by muscle mass nor diet



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<sup>1</sup>Berry, Daniels and Ladin 2019

## Psychosocial Evaluation

- Protect equal access to health
  - Be less subjective
- Transplant system's promise: share precious resources equitably
- Do not penalize patients for unjust circumstances and outcomes
  - Mass incarceration
  - Residential segregation
  - Economic marginalization



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## Living Donors of Caribbean Origin

- Legal immigrants or naturalized citizen recipients
  - ✓ living donor candidates may exist in their country of origin
    - Problem- not considered because of immigration restrictions
  - ✓ US policy: living donor support (Federal Registry)
  - ✓ Solution: Center specific petition of the DOS on behalf for the donor
    - 86% approved by DOS
    - 70% became donors
    - All but one returned to country of origin/ 1 granted residency
    - Foreign national met UNOS lab and clinical 2 yr. f/u criteria



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## Summary

- Kidney transplantation
  - ✓ Excellent outcomes
  - ✓ Initial policies – allocation disparities/poorer outcomes in AA
  - ✓ Awareness, outcomes research and years of advocacy have resulted in more just national allocation policies
  - ✓ Awareness of policy can benefit Caribbean patients
  - ✓ Still more areas to address
  - ✓ Center practices and provider bias continue to impact access and outcomes



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# *Opioid Management within the General and Caribbean Populations*

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September 10, 2022

## Purpose and Objectives

### PURPOSE

To update and optimize the knowledge base of attendees in opioid use and addiction in general and in the Caribbean community

### Objectives

- To review the patterns of opioid use and the impact of addiction on the behavioral and physical health of users.
- To familiarize the audience with unique aspects of the Caribbean culture and the impact of migration on opioid use and addiction.
- To identify and implement effective and efficacious treatment options in these heterogeneous ethnic populations in the United States.



## Financial Disclosure

We have no financial disclosures.



## Agenda

- History of opioids
- Dynamics of opioids and their use in the clinical setting
- Mechanism of action and adverse effects of opioids on the general population
- Addiction red flags and overdose
- Caribbean culture and opioids
- Impact of migration and acculturation
- Review of various treatment modalities and effectiveness/ efficacy



## Factoids about Opioids

- The current opioid crisis is one of the most widespread drug epidemics in US history for all racial and ethnic groups.
- In 2017 with nearly 50,000 deaths from opioid related deaths from overdose the opioid crisis was declared a national public health emergency.
- In 2018 10.3 million people misused opioids including prescription opioids and heroin and 2 million had an opioid use disorder (OUD).



## Factoid about Opioids (Cont'd)

- Drug overdose deaths increase every year since the 1970's, except for 2018.
- There was a 15% increase in 2021(108,000), after a catastrophic increase in 2020 (93,000) as per CDC.
- There is a loss of life from drug overdose every 5 minutes.
- Drug overdose killed about a quarter as many people as COVID 19.



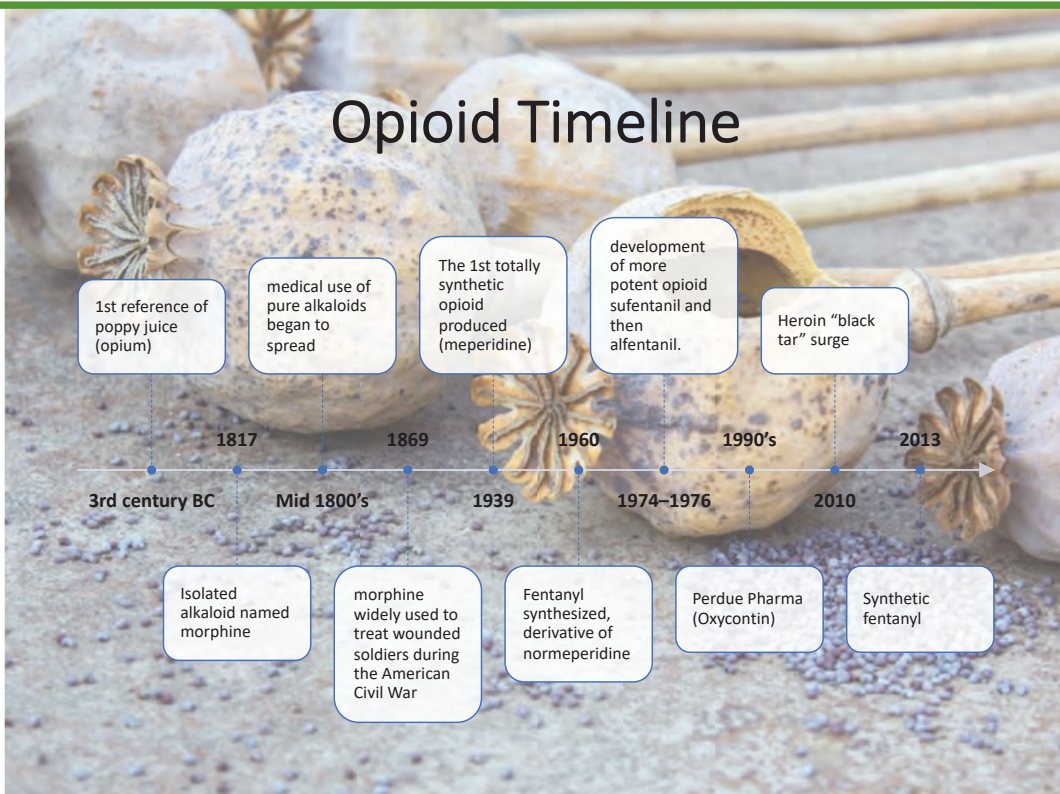


## History of Opioids

An opioid is any natural or synthetic chemical that has opium-like effects similar to those of morphine. All opioids bind to opioid receptors in the central nervous system (CNS)

Opiates, on the other hand, are a specific type of opioid derived directly from the opium poppy and include opium, codeine, morphine.

## Opioid Timeline





## Pharmacodynamics of Opioids

### • Opioid receptors and function

- Mu- analgesia, sedation, euphoria, respiratory depression, constipation and physical dependence
- Delta—mild analgesia and less respiratory depression
- Kappa—analgesia with fewer adverse effects

### • Agonists

- Morphine, fentanyl, oxycodone, hydrocodone methadone
- Activate Mu receptors, producing analgesia

### • Partial agonists

- Buprenorphine
- strong affinity for Mu receptors but produce mild analgesia that is accompanied by a ceiling effect

## Pharmacodynamics of Opioids

### • Agonist-Antagonists

- Pentazocine, butorphanol and nalbuphine
- Antagonists on Mu receptors and agonist on Kappa receptors, leading to milder analgesia effects with fewer adverse effects

### • Antagonists

- Naloxone and Naltrexone
- Block Mu and Kappa receptor activation, preventing analgesia

### • Tramadol

- A centrally acting synthetic opioid, with dual mechanism of action
- Tramadol and M1 metabolite, binds to Mu-opioid receptors
- Does not produce significant respiratory or CV effects in most patients



## Opioids Antagonists Clinical Use

Opioid antagonists have no effect when administered alone. When given after a dose of agonist, they promptly reverse all of the actions of the agonist.

To reverse the effects of opioids- In the treatment of opioid overdose i.e. Naloxone

To diagnose physical dependence on opioid drugs- displaces the opioid from the receptor causing an immediate withdrawal response.

To prevent readdiction in an individual who has been detoxing from opioid drugs.

## Adverse effects of Opioids

### Short- term effects

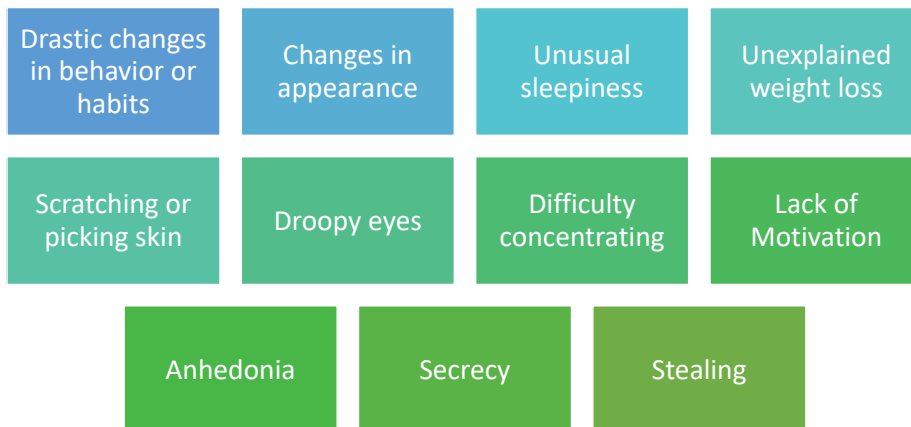
- Fatigue
- Euphoria
- Lethargy
- Drowsiness
- Respiratory depression
- Mental Fog
- Headaches

### Long -term effects

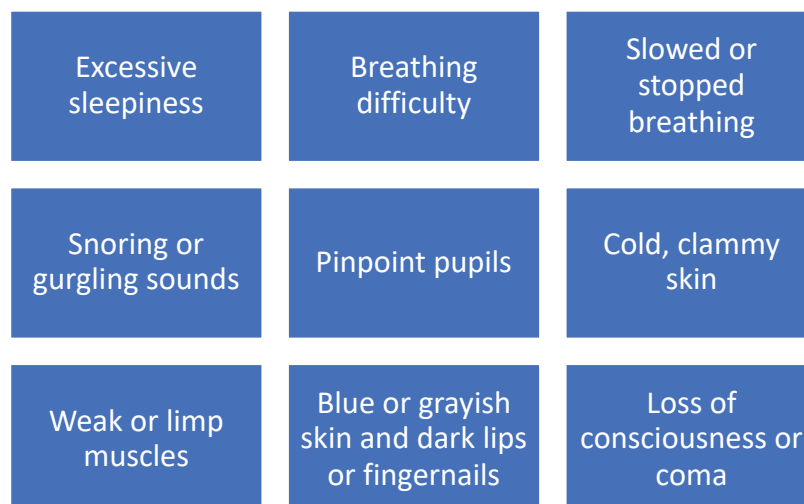
- Increased risk of MI
- Irregular heartbeat
- Depression
- Addiction
- Severe abdominal pain
- Hallucinations
- Constipation



## Red Flags of Opioid Addiction



## Cardinal Signs & Symptoms of Opioid Overdose







## Caribbean Culture

Caribbean culture results from Caribbean history and geography.

It is a constellation of languages, religions, values, customs, festivals, art forms, sports and other forms of self expression, making it a dynamic one.

## Caribbean Culture

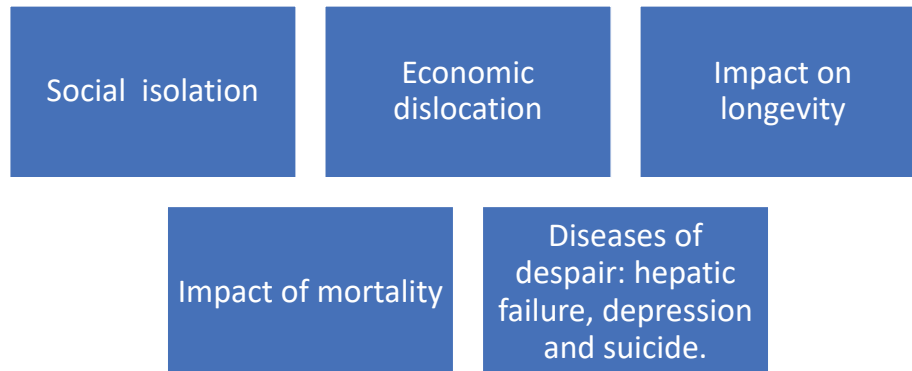
Caribbean's multiculturalism is reflected in its many dialects and languages.

- English is the most common language spoken by many locals
- Spanish is the official language of the Dominican Republic, Puerto Rico, and Cuba
- French is spoken in Haiti, Guadeloupe, Martinique, French Guiana, and St Martin.
- People in Aruba, Curacao, and St Maarten speak Dutch.
- Creole and Patois versions of these languages are spoken across the region.





## Social Impact of Opioid Overdose



## Opioid Addiction and the Community

### General Population

- Widespread Prescription opiate addiction
- In 2020, 9.5 million people aged 12 or older misused opioids in the past year. **Among the 9.5 million, 9.3 million people misused prescription pain relievers** and 902,000 people used heroin (2020 NSDUH)
- An estimated 1.6 million people aged 12 or older had an opioid use disorder based on 2019 NSDUH data

### Caribbean Population

- Opioid misuse (heroin use and prescription opioid misuse) rate among Hispanic/ Latinos is similar to the national population rate, about 4 percent.
- In 2018, 1.7 million Hispanic/ Latinos and 10.3 million people nationally, aged 12 and older, were estimated to have engaged in opioid misuse in the past year.



## Impact of Immigration

- Acculturation experience and mode of acculturation
- Acculturative stress
- Age of and reasons for immigration e.g., voluntary vs involuntary, political vs economic...
- Behavioral health/mental conditions associated with immigration

## Cross Cultural Approaches To Opioid Use

Attitude towards  
opioid use



Local growth or  
dependence on  
imports/Prescribed

Epidemiology and  
social consequence of  
opioid use

Drugs of choice

Reasons for use  
(utilitarianism,  
celebratory, ritualistic  
or spiritual)

Demographics and  
ecological factors



## Sociocultural factors affecting treatment

- Religion
- Stigma, misperceptions
- Language barriers
- Intergeneration substance use and polysubstance misuse
- Discrimination and trauma



## Treatment Factors

- Availability and access
- Locus of treatment
- Familiarity with treatment modalities
- Facilitators and barriers to treatment
- Pharmacological vs. psychosocial treatment modalities



## Medication-Assisted Treatment (MAT)

- Medication-Assisted Treatment (MAT)--FDA-approved medication in conjunction with a psychosocial intervention.

### Medications approved for MAT include

**Methadone**- Reduces withdrawal symptoms and cravings and blocks the euphoric effects of opioids like heroin, morphine, oxycodone, and hydrocodone.

**Buprenorphine**- Treats withdrawal symptoms and cravings and is less likely than methadone to cause intoxication or dangerous side effects such as respiratory suppression. ,

**Naltrexone**- Blocks the euphoric and sedative effects of opioids. It is not an opioid and is neither intoxicating nor addictive.

## Psychosocial Interventions

- Community Strategies to combat addiction e.g. culturally tailored public awareness, partnering with local providers and pharmacies, training staff and community members about interventions.
- Individual, group and family therapy
- Therapeutic communities(TCs)
- Specific psychosocial interventions e.g. relapse prevention (harm reduction), psychotherapy, network therapy.



## What's Lacking?

- Demographics and biostatistics in data collection
- Paucity of information in addiction literature about Caribbean populations.
- Access to, knowledge about public health insurance and availability of addiction treatment centers and other resources.
- Education and knowledge base of healthcare providers RE this ethnic group.
- Need for federal and private funding to address the scourge of opioid use and addiction in specific populations.
- Need for parity and /or appropriate reimbursement from insurers.

## Summary

- The current opioid crisis is one of the most widespread drug epidemics in US history for all racial and ethnic groups
- Opioid overdose primarily caused by Fentanyl, have increased significantly in the US since 2017.
- Prescription pain relievers are responsible for most of the opioid use disorders (OUD) in the US population.
- Caribbean populations are heterogeneous and equally impacted.
- Migration and its attendant factors e.g. poverty, economic dislocation and acculturation issues aggravate the problem of opioid addiction in Caribbean populations.
- Special outreach efforts eg education of users and providers, may ameliorate the opioid epidemic in this ethnic group.
- Physical and behavioral health problem have a direct impact on affected individuals and society in general.





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# Physician Wellness and its impacts on the Caribbean population.

Kelechi C. Fluitt, PhD

2022 CME Conference on Health Disparities Impacting Global and Local  
Caribbean Population

Howard University

September 9, 2022

## Disclosure

- I have NO disclosures to report.





## Purpose

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The goal of this presentation is to raise awareness about the impact physician wellness has on their patients particularly individuals from the Caribbean population.

## Objectives

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- Define physicians' wellness and the factors that negatively impact it.
- To promote emotional well being practices.
- Identify ways to improve physicians' wellness.





# Agenda

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- Reflection
- Keywords/ Definitions
- Introduction
- Physician Wellness
- Caribbean population
- Self care

# Brief Biography

---

- Dr. Kelechi C. Fluitt (Formerly Anyanwu) currently serves as the Director of Outreach, and a clinical staff member at the Howard University Counseling Service. She is a clinician, educator, researcher, and moderator who specializes in group psychotherapy, diversity training, leadership training and working within university and college settings. She has specialized focus on issues related to HBCU student success, self-efficacy, leadership efficacy, imposter syndrome, religious coping, and grief. Dr. Fluitt received her PhD in Counseling Psychology from Howard University. She completed her American Psychological Association Accredited Internship at the Howard University Counseling Service. Dr. Fluitt has diverse clinical training experiences including the Veterans Administration, DC Superior Court, University and Community colleges. She completed a two-year fellowship at the Washington School of Psychiatry National Group Psychotherapy Institute in Washington, DC. She is a member of the American Psychological Association, American Group Psychotherapy Association and Mid Atlantic Group Psychotherapy Association where she serves as a member of the board in the position of Director of Training. She is also a Lifetime member of Psi Chi International Honor Society. Dr. Fluitt is married to Dr. Maurice B. Fluitt and they are the proud parents of four children.



# REFLECTION

## Keywords

- **Wellness** - Wellness is the act of practicing healthy habits on a daily basis to attain better physical and mental health outcomes, so that instead of just surviving, you're *thriving*.
- **Health**- State of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (WHO, 2022)
- **Burnout**- Characterized by emotional exhaustion, cynicism, depersonalization, reduced perception of personal efficacy, and reduce effectiveness. It is a psychological response to work related stress. (Walker and Pine, 2018)





# Introduction

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- The American Medical Association Code of Ethics Opinion 9.31 states that physicians have a responsibility to maintain their health and wellness.
- One major impact to physicians' wellness is burnout.
- Physician burnout is defined by three elements—emotional exhaustion, depersonalization and a lost sense of personal accomplishment.
- According to Walker and Pine (2018) physicians' burnout not only impact physicians and physicians in training but also their patients, colleagues and the hospital system.
- It can affect physicians at any point in their career, even as early as medical school . It impacts at least 50 percent of US Physicians. (Walker and Pine, 2018)

# Work Factors that contribute to Burnout

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- **Working too many hours** increases the chances that you burn out, with the odds rising by 3 percent for each additional hour you work a week.
- **Taking night or weekend call** increases your odds of burnout by 3 to 9 percent for each additional night or weekend you spend on call.
- **Performing work-related tasks at home** increases your odds of burning out by 2 percent for each additional hour you work at home per week.
- **Having a work-home conflict** increases burnout odds by 200 to 250 percent.
- **Practicing in certain specialties**, such as emergency medicine, general internal medicine and neurology, increases your odds of becoming burned out by as much as 300 percent when compared with burnout in other specialties.
- **Working in a private practice** increases your odds of burnout by about 20 percent no matter what your specialty or work hours.
- **Receiving incentive pay** increases your burnout odds by 130 percent when compared to physicians who are paid under other salary models.
- **Being a midcareer physician** increases your burnout odds, with burnout 25 percent more likely among these physicians than those early or late in their career.
- **Having a career that doesn't fit what you find most personally meaningful** increases the odds of your becoming burned out, with studies finding that burnout is 275 percent more likely among physicians who spend less than 20 percent of their work effort on this.
- **Using computerized physician order entry or enduring other clerical burdens** drives burnout, with burnout 29 percent more likely among physicians who enter orders into a computer.



## Why is it so difficult to care for ourselves?

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- Lack of insight- A physician may be reluctant or unable to see themselves as needing help.
- Job demands
- Lack of time
- For Physicians who do take the appropriate intervention (i.e., time off, stating medication, therapy or taking a mental health day) the fear of incurring shame, stigmatization and even licensure consequences can pose a significant deterrence to seeking care.

## Caribbean Population

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According to Evans, Whitehead and Diderichsen 2001, Caribbean societies share a common history of colonialism, slavery, and plantation industry, which has given shape to a strong Caribbean identity. They have a rich mixture of cultural influences, including that of Indigenous Amerindians along with European, African, Asian (East Indian and Chinese), and Middle Eastern influences.

Sastre, Rojas, Cyrus, De La Rosa and Khoury (2014) note that Caribbean people experience impoverished socioeconomic conditions which contribute to poor health outcomes and increase the risk for deepening inequalities.

Poverty and lack of formal education, as well as population and household patterns, augment the inequalities associated to poor health outcomes.

The Caribbean has the highest death rates from heart disease and the top five countries for diabetes in the Americas. Other conditions such as cancer, stroke, diabetes, and HIV are among the leading causes of death. In 1995, AIDS-related death was added as one of the leading causes of death and in 2005 it became the leading cause of death among adults aged 15–44.

Profound gaps in access to care remain, affecting the wellbeing of the Caribbean people.





## Leading Cause of death in world

Table 1. Leading causes of death: Caribbean, world, and high income countries (5,8).

	<i>Caribbean</i>		<i>World</i>		<i>High income countries</i>	
	<i>Cause of death</i>	<i>%</i>	<i>Cause of death</i>	<i>%</i>	<i>Cause of death</i>	<i>%</i>
1.	Heart disease	15.7	Heart disease	12.8	Heart disease	15.6
2.	Cancer	14.6	Stroke	10.8	Stroke	8.7
3.	Stroke	10	Respiratory infections	6.1	Trachea, bronchus, lung cancer	5.9
4.	Diabetes	10	Pulmonary disease	5.8	Alzheimer's disease	4.1
5.	HIV/AIDS	6	Diarrheal diseases	4.3	Respiratory infections	3.8
6.	Hypertensive diseases	6	HIV/AIDS	3.1	Pulmonary disease	3.5
7.	Accidents	4	Trachea, bronchus, lung cancer	2.4	Colon and rectum cancer	3.3
8.	Homicide	3	Tuberculosis	2.4	Diabetes	2.6
9.	Respiratory infections	2	Diabetes	2.2	Hypertensive diseases	2.3
10.	Respiratory diseases	2	Traffic accidents	2.1	Breast cancer	1.9

- Sastre, Rojas, Cyrus, De La Rosa and Khoury (2014) noted that one of the barriers to better health/ wellness in the Caribbean included lack of skilled health personnel. For the clinicians that are skilled one of the impacts are strenuous work schedules.
- Strenuous work schedules (contributes to physician burnout) negatively impacts the quality of health care.
- When physicians are fit, well rested, and feel appreciated, everyone wins. (Walter and Pine, 2018)



# What is Self Care?

**Self Care** - The Practice of taking action to preserve or Improve one's own health.

- Mental/ Emotional Self Care – Actions that help you connect, process and reflect on your emotions and improve mental well being. (i.e., Journaling, seeing a therapist)
- Physical Self Care – Activities to improve the well being of your physical health (i.e., dancing, fitness class, taking a nap)
- Spiritual Self care – Activities taken towards healing your inner self or soul (i.e., spending time in nature, religious connection)
- Social self care – Nurturing relationships and spending quality time with others (i.e., Host a game night), go to dinner)
- Professional self care – Actions taken to support feeling balanced fulfilled in your career while also preventing burnout (i.e., Taking a mental health day. DND after work hours)
- Practical self care – Action taken to create and fulfil your daily needs (i.e., decluttering your space, meal prepping, washing your clothes)

## 4-7-8 breathing technique

@mentalhealthremix | nicole@mcox.com

4 seconds

breathe in through your nose

7 seconds

hold your breath

8 seconds

exhale through your mouth

repeat

as many times as needed.





## Summary

---

- Burnout impacts and is experienced by physicians and physicians in training. It can begin as early as medical school.
- ‘Wellness’ is not a magic pill to be taken at the sign of burnout.
- The Caribbean population can benefit from doctors who take care of themselves.
- When physicians are fit, well rested, and feel appreciated, everyone wins.
- It is essential to create organization systems that embrace self care as well as enact policy and redesigning practices.
- Self care is essential and multifaceted.

## Contact Information

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