



## 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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# 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.

# 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



## 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

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## 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.

| 6



# 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.





# HRD Corps Radiology Capacity Development - Assessment Tour Malawi, Africa

Berndt P Schmit, MD MBOE

Associate Professor of Radiology  
George Washington University



## Objectives

- Introduce Humanitarian Radiology Development Corps' model & philosophy of capacity development
- Describe importance of complete Value Stream development
- Differentiate radiology capacity development in Low Income vs Middle Income countries
- Describe models of positive 'sustainable' engagement
- Raise awareness of radiology capacity development in Malawi





## Disclosures

- Consultant with Radiology Business Solutions
- Founder of Humanitarian Radiology Development Corps, 501c3 charity
- Advisor Emagine Solutions Technology
  - VistaScan – handheld ultrasound
  - The Journey – pregnancy monitoring app



## Content

1. HRD Corps
2. Value Stream Map
3. “Sustainability”
4. Malawi Radiology Assessment





## Humanitarian Radiology Development Corps

*Epiphany!*

*We're teaching people to fish who don't have fishing poles!*



## HRD Corps

- 501c3 tax exempt charity in USA
  - Founded 2017
- Focused on Capacity Development
  - *To build self-sustainable improvements in health care with our expertise and resources in radiology*
- Haiti, Bolivia, Nicaragua, Malawi, Mexico
- Three Pillars of Action
  1. Innovation – *Finding* a better way
  2. Education – *Teaching* a better way
  3. Capacity – *Building* a better way





## HRD Corps Accomplishments



Bolivia October 2019

- Equipment Donations ~ \$1.6 million
  - 28 Sequoia Ultrasound
  - 6 VistaScans Ultrasound
  - 2 Portable X-ray
  - 1 Chison S2 Ultrasound
  - 2 radiology PACS computer systems
- Mobile Breast Cancer Screening Truck, Bolivia
- Bolivia, Haiti, Nicaragua,
- Teach: Medical Students, Residents & Technologist
  - 3 Annual Symposiums for Technologists, Haiti
- Organizational
  - Fostered formation of: ATIMS
    - Association Technologist Imaging Medical Society, Haiti



Sequoia

VistaScan



AMX4 Portable Xray  
March 2020



## Value Stream Map

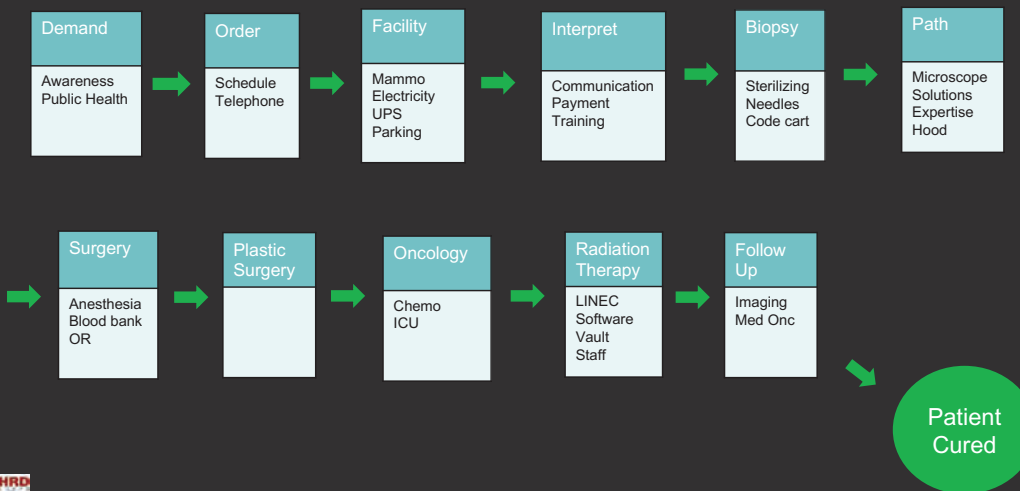




## Value Stream Map

Patient with Breast Cancer

Problem Statement: Breast cancer death  
Goal: Western Level of Care



## 'Sustainability'





## 'Sustainability'

*3 levels of positive engagement*

1. Episodic Action
2. Teaching
3. Capacity building



## Level 1 - Engagement

*Episodic Action*

- Saving Starfish



Everything counts, even on a small scale  
Avoid Analysis Paralysis!





## Level 2 - Engagement *Teaching*

- Teach Fishing



Knowledge stays & empowers  
Teaching is a multiplier



## Level 3 – Engagement *Capacity Building*

- Making Fish Sandwiches Locally



Build the whole Value Stream  
Systems require a broad web of infrastructure  
Long term effort





# Malawi



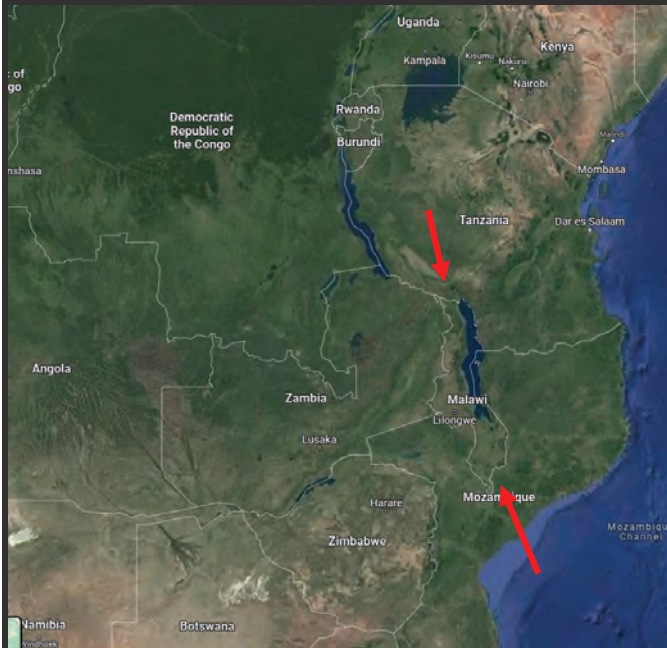
# Malawi







# Malawi





## Malawi – fun on the roads





## Malawi

- 20 million people
- GDP (nominal) = \$625
- 4th poorest country in world (Global Finance 2019)
  - Haiti GDP = \$1943 (16<sup>th</sup> poorest)
- English
- Christian 82%, Islamic 13%
- Agricultural
  - Tobacco
- South is richer/nicer
- 3 Electric Power Plants
  - 1 destroyed by Tropical Storm Ana, Jan 2022



## Malawi

### *Healthcare Landscape*

- Public Hospitals
- Charity Hospitals
- Private Hospitals





## Malawi

### *HRD Corps Partners*

- Faith-based Organizations
  - Church of Central Africa Presbyterian (CCAP)
    - Malawi, Zambia, Tanzania
    - Goal: 10 Countries in 10 years
    - Started Surgery training program in Malawi
  - Medical Benevolence Foundation (MBF)
    - Founded 1963
    - 34 countries



## Malawi – CCAP system

- 5 hospitals – initial information
  - All have X-ray
  - All have Ultrasound
  - No Radiologists
  - No CT, MRI, C-arm
  - No PACS





## Malawi Radiology

- 4-5 radiologists
  - Some teleradiology coverage from India & Australia
- Starting first Radiology Residency in Sept 2022
  - 2 residents/year
- No radiology technology training programs
- 2 radiology service companies
  - “But no one pays. So, no one gets service”



## Malawi Radiology

- CT
  - Several...?...?
  - Kamuzu Central Hospital: 64 slice, broken for 1 year
- MRI
  - One 1.5T used, almost operational (private practice)
  - 0.3T
  - 0.35T
  - Two hyperfine portable MRI



## Operations 101 *Project Definition*

1. Charter
  - *Must be client driven*
  - Assessment of 5 CCAP hospitals
  - Improve Radiology
2. Resources
  - Funding: CCAP & MBF
  - HRD: equipment donations, expertise & training
3. Leadership
  - Partnership of HRD Corps & Local Champions





## HRD Corps Team

- Ali Anderson
  - US technologist, Montana
- Michelle Hershman
  - Thoracic radiologist, Pennsylvania
- Berndt Schmit
  - MSK radiologist, Arizona



Dulles Airport



Huge distances to cover...



Driving





Huge distances  
to cover...

Got Cessna?!



Driving

Flying



### First Charter Flight!







## Charter Flight: Great Views!



## Charter Flights: Saved 3 Days



Griffin,  
S. African pilot



# Meetings

- Hospital Leadership & Clinicians
  - Listening
    - Problems
    - Solutions
  - Data



# Meetings

## Relationship Building with Stakeholders





## Donations



3 crates of PPE from Marshall University  
Dr. Martha Sommers



## HRD Corps Donations



VistaScan hand-held ultrasound for the general surgeons





## Nkhoma Hospital

- The Flag Ship of CCAP
- Adding \$5 million OR & ICU building



## Ancient X-ray Equipment *Ekwendeni Hospital*



Analog controls with Rheostats  
These can be field modified & fixed





## David Gordon Hospital

- X-ray room has broken tube
- Taped on portable Veterinarian X-ray Tube!



## David Gordon Hospital

- Images from Portable Veterinarian X-ray Tube
  - Film fog
  - No collimation
  - Low kV





## Broken X-ray Equipment

- Ekwendeni
- 250 Bed Hospital
- Embangweni
- 250 Bed Hospital

Locks broken:  
All images at 45°  
Table rolls away



Doesn't work at all  
Zero X-ray capability!



## Ekwendeni Hospital

- 2 dead ultrasound machines
- “Junk for Jesus”





## Assessing Ultrasound Capability

- Ali is a superstar!



## Assessing Ultrasound Capability

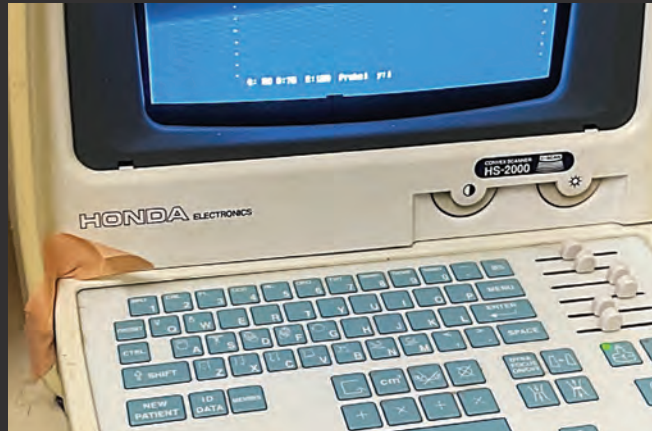
- 20 ultrasound machines in 4 days





## Assessing Ultrasound Capability

HRD Corps Award: "Oldest Ultrasound Machine Ever"



David Gordon Mission Hospital  
Livingstonia, Malawi



## The Future State

Where are we now?

Vs.

Where are we going?







# Building the Future State

1. Money
2. Grit



## Assessment Spreadsheet Showing Current Capability

HRD Corps Malawi CCAP Hospitals Needs Assessment, May 2022

Hospital	Beds	Volume	OB	XR	US	Specialists	Techs	OR
Mulanje	~100	XR-50/day USS 40/day	-250 deliveries/month -20-25% C-sections	Fuji DR (2019) x 1	Mindray laptop -2 probes (curved and TV) -No Doppler	No Specialists 5 Medical Officers 1 BSc Surgery 2 BSc. Ob/Gyn 1 BSc Palliative Care 1 Degree Medicine	-US/XR tech -1. Nelson Chikwili (HOD) has degree in US 2. Yankson Kapoto (diploma holder)	2 ORs (both in use. One equipped with ventilator. One minor OT)
Nkhoma	~250	XR- 50/day US- 40/day (mainly OB)	-3500 deliveries/yr -20% C-section	-Carestream Fixed XR room CR *  -Refurb C-arm not installed yet  View XR on pseudo PACS	Zenaga console -3 probes (2 curved**, 1 linear) -No Doppler  Toshiba console -4 probes (2 curved, 1 linear, 1 TV***) -Doppler -Toshiba console (older one) -Used for OB -No Doppler	-5 surgeons -2 surgery residents -3 fam practice residents -1 Ophthalmologist (Consultant) -3 Medical Officers (MO) -7 Clinical Officers - Fam Med Specialists	US/XR techs- Gift (good US) and Douglas (only some US, mainly radiographer)	2 ORs Plan for more (~7)  Planned \$5m expansion
David Gordon	~50	XR-133/tri; 1XR/day US-169/tri; 1.5/day (because most pts are referred)		-Using Dental tube; very small  -Film small and fogged	Honda US laptop size -1 probe (curved) - Very old with poor image quality -No Doppler -mainly OB  3 others not functioning	1 medical doctor coming  9 Clinical Officers	-No tech aid for XR, so not doing a lot of XR  -2 COs do US -No surgeons or OBs	1
Ekwerende	250	XR-not functioning for 6 months -usually 155/yr (+100 referred out if critical pt)  US- 3000 in 2021	381 deliveries/quarter; ~3/day	XR not working- installed in 1980s -Todd research model  Suboptimal dark room	Samsung 15.6" US portable laptop -1 probe (curved) -Doppler  Hitachi EUB-500 console -2 probes (1 curved, 1 TV that may not be functioning)  2 other consoles - one not functioning at all, one Philips that was glitchy after turning it on (caked buttons)		1 US/XR tech- Stanley	2 ORs but no anesthetic machines
Embankweni	145	XR- 110/tri US-813/tri		Fixed XR* -out of XR film	Logiq e laptop -1 probe (4C curved) -Doppler	No peds, surgery or OB  6 COs do C-Section, appendix, hernia	1 XR/US tech- Gibson (has echo training)  2 COs are US trained	1 OR New Building for 3 ORs (unfinished Concrete)





## Envisioning the Future State: *Ekwendeni New Radiology Department*

- Planning the New Space
  - Concrete walls – Yay!



## Building the Future State *X-ray Solution*

### MinXray Portable Machine

- A robust solution for the austere environment
- Staged deployment
  - Use for all X-rays initially
  - After X-ray room implemented use as portable only





# Proposed Build-out

- 3 Phases
  - Critical priorities first
  - Integrate & repurpose as project progresses

**HRD Corps Proposal for Radiology Improvement at Malawi CCAP**  
18 June 2022

**Assessment Summary**

After invitation by our hosts at MBF and CCAP, the 5 CCAP hospitals at Mulanje, Nkhoma, David Gordon Mission Hospital, Embangweni and Ekwendeni were toured by HRD Corps Assessment team during the week of May 9-13, 2022. The team included Drs. Michelle Herzman and Bernad Schmitt, and Ultrasound Technologist Ali Anderson. Sent separately is the Malawi CCAP Hospital Assessment spreadsheet detailing our findings. Due to time constraints and the COVID pandemic, some of our process and logistics were truncated, however, on good faith, we feel we were able to obtain an actionable assessment of the radiology capability and situation at each hospital.

Given Malawi is a Low Income Country, we were overall very impressed by the level of care, the level of professionalism and dedication we encountered at all facilities. As a team, we enjoyed working with everyone and experienced strong engagement with all client sites.

Our HRD Corps goal is to help CCAP build long term independent capacity improvements to radiology at all 5 hospitals. This is a large scale and complex project. We envision this will require several stages of development, first addressing clinically critical issues. Then as resources become available, a careful coordinated buildup of radiology leading to high-quality digital imaging integrated across all CCAP facilities. This would include fixed and portable X-ray capability, as well as both full-size and portable ultrasound capability at all facilities. Appropriate training will need to be developed and delivered. Currently, we see Nkhoma as the likely long term flagship facility for the CCAP system, and as such Nkhoma would likely carry the responsibility for leading in radiology technology implementation and training.

**Proposed 3 Phase Buildout**

HRD Corps believes in full Value Stream project development, and as such we will try to help build complete integrated services. Balancing workflow and capacity, as well as timing of project delivery are extremely difficult in Low Income Countries. However, as your project partners, we remain vigilant to achieving fully functional and balanced services across an organization. Our experience with radiology development in LIC is that circumstances are highly fluid. We believe in detailed planning but emphasize our openness to change and the necessity to be real-time adaptive as circumstances change. Our initial concept for a three phase buildout is:

**Phase 1 – Critical Needs**

1. X-ray capability at Ekwendeni
  - a. Probably most expeditiously met with a Minixray portable machine
2. Solar inverter repair at Embangweni
3. Fund raising with CCAP and MBF



**Phase 2 – Improve existing capability (Prioritized by broken or degree of obsolescence)**

1. Upgrade Full-size Ultrasound
  - 1. DGMH
  - 2. Mulanje, Nkhoma, Ekwendeni, Embangweni
2. Concurrently, upgrade all sites with hand-held or portable US as bridge to Full-size Ultrasound
  - 1. Ekwendeni
  - 2. DGMH
  - 3. Nkhoma, Embangweni, Mulanje
4. Upgrade Fixed X-ray (with Digital Radiography)
  - 1. Ekwendeni & DGMH
  - 2. Nkhoma, Embangweni
  - 3. Convert Mulanje from CR to DR

**Phase 3 – Expand Capability**

1. PACS – independent Mini-PACS digital image storage and viewing at each hospital
2. Internet & Intranet buildout – integrate all 5 facilities
3. CT – Location will be determined by needs, infrastructure, and support capability.

**Discussion & Moving Forward**

We have already reached out to HRD Corps vendor partners to begin the equipment search and acquisition process. With time, we anticipate being able to obtain refurbished full-size Ultrasound machines as in-kind donations. However, the Full-size X-ray, the Portable X-ray and any Portable Ultrasound equipment will likely have to be purchased from as new or refurbished equipment - we anticipate this will likely cost \$200,000 - \$300,000 system wide.

We have a vendor commitment to supply PACS computer equipment and PACS software as an in-kind donation. However, PACS implementation cannot occur until appropriate internet/intranet capability and on-site IT staffing support are developed.

Training is a critical element of capacity development. We anticipate 2-3 HRD Corps \$10k per year for project management and training purposes. HRD Corps will cover these travel and logistic expenses. Where hand-held portable ultrasound is appropriate, HRD Corps can donate VistaScan ultrasounds.

We are excited about this project and look forward to growing our partnership together and working together on this important project.

Sincerely,  
Team HRD Corps

# Full Steam Ahead!





## Summary Malawi CCAP Radiology

*Low Income Country Radiology*

- Knowledge Gaps
  - Need Radiologists
  - Paucity of Training
    - Technologists & Residents
- System Gaps
  - Broken Value Streams
    - Radiology equipment
    - Maintenance
    - Complete clinical service
- Digital Solution
  - Cost savings & Integration
  - Beware Data Colonialism!
- Solar Power is Key



## Thank You!



[bpschmit12@gmail.com](mailto:bpschmit12@gmail.com)



[www.hrdcorps.org](http://www.hrdcorps.org)





# HRD Corps Radiology Capacity Development - Assessment Tour Malawi, Africa



*The Country Doctor*, Eugene William Smith

**Berndt P Schmit, MD MBOE**

Associate Professor of Radiology  
George Washington University





## Pocket Sized, Hand-held Ultrasound *The Age of Point of Care Ultrasound*



*The Country Doctor*, Time Life  
Eugene William Smith

Berndt P Schmit, MD MBOE  
Associate Professor of Radiology  
George Washington University



## Objectives

### Raise Awareness of Hand-held Ultrasound:

- Market
- Equipment capability & options
- Equity & access issues





## Disclosures

- Advisor Emagine Solutions Technology
  - VistaScan – handheld ultrasound
  - The Journey – pregnancy monitoring app
- Owner of a GE Vscan



## Hand-held Ultrasound

- GE
- Siemens
- Philips
  
- Clarius
- Butterfly
- VistaScan
- SonoQue





## GE - Vscan Air & Vscan Extend

- 3-year Warranty
- No Fees
- Wireless: Android & iOS
- Wired – permanently attached
- Single & Dual Head Probe
- DICOM & JPG



Vscan Air  
Handheld Ultrasound

\$4700 - 5600



Vscan Extend  
Handheld Ultrasound

\$5300

**Vscan Air™**

Vscan Air consists of a dual-headed probe which integrates both curved and linear array transducers, and the activation of the Vscan Air app for installation on your personal Android™ or iOS® device.

Select your option [Compare>](#)

**Vscan Air Base Package**  
\$4,765.00 [Details v](#)

**Vscan Air plus POCUS Foundations Package**  
\$4,880.00 [Details v](#)

**Vscan Air plus SonoSim™ 365 Package**  
\$5,560.00 [Details v](#)

- **Vscan Air base package**
  - Vscan Air CL probe (high frequency linear), protective case, quick start guide, wireless charging pad including micro USB cable and an AC adapter type A)
  - Vscan Air app is available for download on Google Play or Apple Store®
- **SonoSim 365 for GE Healthcare\***
  - SonoSim Probe and SonoSim Drive
  - Five SonoSim Modules
  - One-year warranty of SonoSim Care

\*By purchasing this option will give GE Healthcare the permission to provide your name and contact information to SonoSim for entitlement.

## Siemens - FreeStyle

- Price ~\$10,000 (2 probes)
- Large form-factor
- PACS compatible













## Philips - Lumify

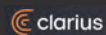
- \$4495. No fees
- 3 Probes
- 5-year warranty
- Android only
- Wired – detachable
- DICOM



		
989605450382 //795005FUS6881	989605456252 //795005FUS6884	989605451352 //795005FUS6882
<b>Curved Array Transducer</b> Lumify C5-2	<b>Phased Array Transducer</b> Lumify S4-1	<b>Linear Array Transducer</b> Lumify L12-4
AS4,495.00	AS4,495.00	AS4,495.00
1 	1 	1 

## Clarius

- \$2995 + \$595/yr Membership
- Wireless
- 3-year warranty
- Android & iOS
- DICOM is add on



### High-Definition Ultrasound Imaging You Can Trust for Your Specialty

Manage your exams anywhere and improve patient outcomes with clear, real-time imaging that is easy to use, affordable, and ultra-portable.

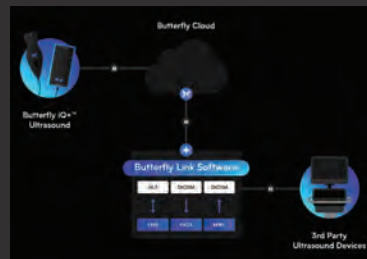
Now starting at 2995 usd with 595 annual membership.





## Butterfly iQ

- \$2400 + Membership  
No membership = can't save or store images  
Data colonialism
- Wired
- 1-year warranty, 4 foot drop tested
- Android & iOS
- Butterfly Link Software => DICOM, \$?



**Choose the right plan for you.**

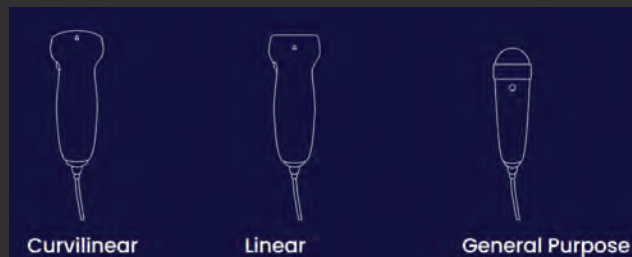
Unlock the power of your Butterfly iQ+ with membership plans tailored for every kind of practice.

Pro Custom	Pro Individual	iQ+ Care	Enterprise
<p><b>Flexible</b> Starting at \$199</p> <p>Our iQ+ Pro Custom offers, along with our other Pro Custom solutions, the most flexible membership plan for your needs. Choose between four different Diagnostic Tools, Professional Tools, Education and Certification.</p> <p>Service fee: \$150 (or \$150 and \$400) annually (or \$100)</p> <p><a href="#">Choose iQ+ with Pro Custom</a></p>	<p><b>\$420</b> per year</p> <p>Our most complete ultrasound solution for individual users. Get all you will need: Diagnostic Tools, Professional Tools, Education and Certification in the marketplace.</p> <p><a href="#">Choose iQ+ with Pro</a></p>	<p><b>Pricing on request</b></p> <p>A dedicated service and remote access to our experts, available 24/7, to help you with any emergency or complex situation.</p> <p><a href="#">CONTACT US</a></p>	<p><b>Pricing on request</b></p> <p>A comprehensive, 7x24x7 service designed to support your business and your patients.</p> <p>Specialized support services, personalized training, medical device management and more.</p> <p><a href="#">CONTACT US</a></p>



## VistaScan

- \$4500-\$6000. No fees
- Warranty
  - 1 yr General probe
  - 2 yr Linear & Curved
- Wired - detachable
- Android only
- Color doppler in Beta testing
- No DICOM





## SonoQue

- \$4500. No Fees
- Images on mobile. No DICOM
- 1-year warranty included
  - Buy additional 1-2 years
- Wireless
- iOS only



## Hand-held Ultrasound *Status*

- POCUS & Hand-held ultrasound has *already* arrived!
- Issues:
  - Training
  - Certification
  - Billing
  - How to integrate into practice





## Hand-held Ultrasound *Summary*

- Mature technology
- Many options
- Fees
- Data Colonialism



Thank You!





## Philips

- 3 Probes
  - S4-1
  - C5-2
  - 12-4
- 3 year warranty
- Android only
- Wired





## **Population Health as it relates to Quality and Cost:**

**Implications in Health Disparities and Men's Health**

**Moro Salifu, MD, MPH, MBA, MACP**  
**Professor & Chair, Dept. of Medicine**  
**Chief, Division of Nephrology**  
**Director, Brooklyn Health Disparities Center**  
**SUNY Downstate Medical Center**



### **Disclosures**

- NIH 1 P20MD00687501 (\$5.5M)
- NIH S21MD012474 (\$10M)
- NIH 1P20CA192994-01A (\$1.1M)
- New York ECRIP (\$1.26M)
- Endowed Chair in Nephrology (3.4M)
- SUNY Health Network of Excellence (\$150k)
  
- US patent # 9556235: F11 Receptor antagonists (peptide 4D) as therapeutic agents in vascular disorders. [www.vasocuretherapeutics.com](http://www.vasocuretherapeutics.com)

**Conflicts of interest: None**



## Outline

- Background and definitions
- Rationale for population health
- Evolution and how is it done, a quality and cost perspective
- Populations health determinants and implications for black men's health
- Summary

## Definitions

Public Health: the science and art of preventing disease at the population level

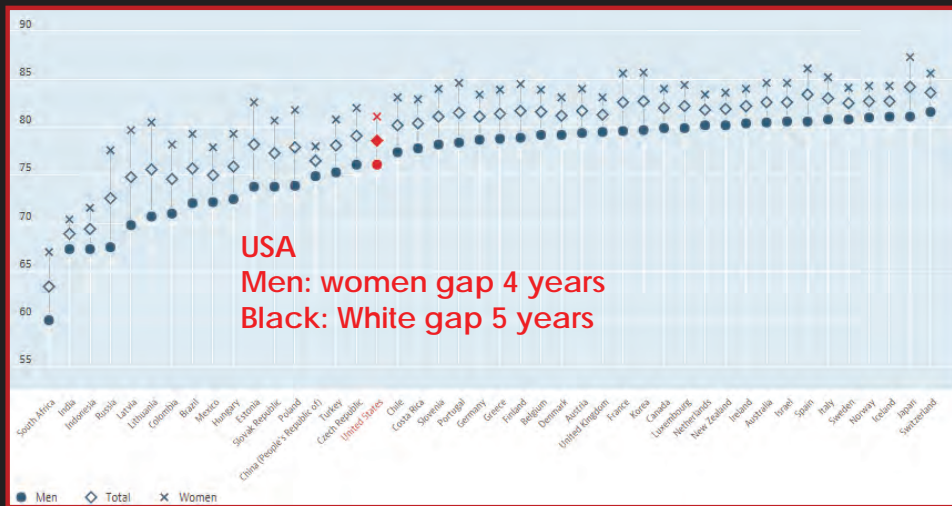
Population Health: the science and art of controlling disease by monitoring performance measures in preventing, diagnosing and treating chronic disease at the population level



## Why is population health important

Healthcare in the USA  
is not necessarily high quality and is too  
expensive

## Life expectancy at birth

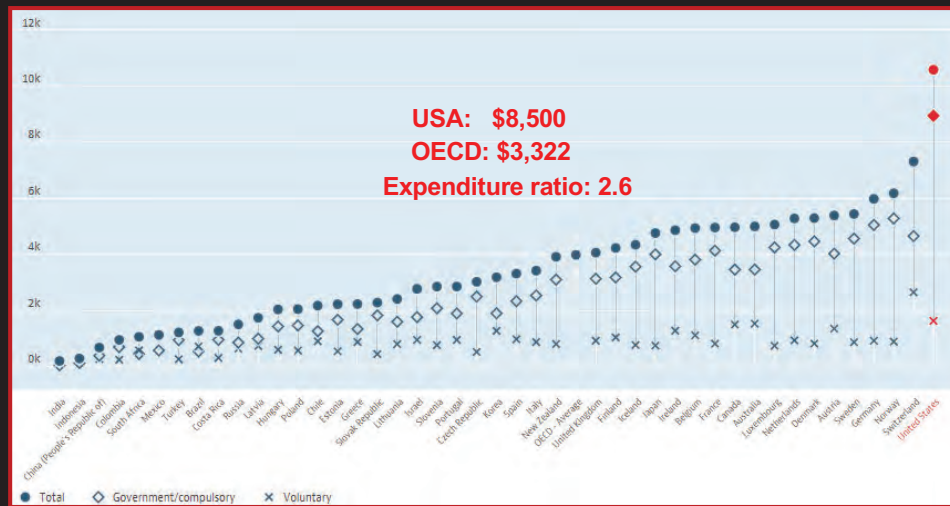


OECD 2017: <https://data.oecd.org/healthstat/life-expectancy-at-birth.htm#indicator-chart>





## Healthcare expenditure by country



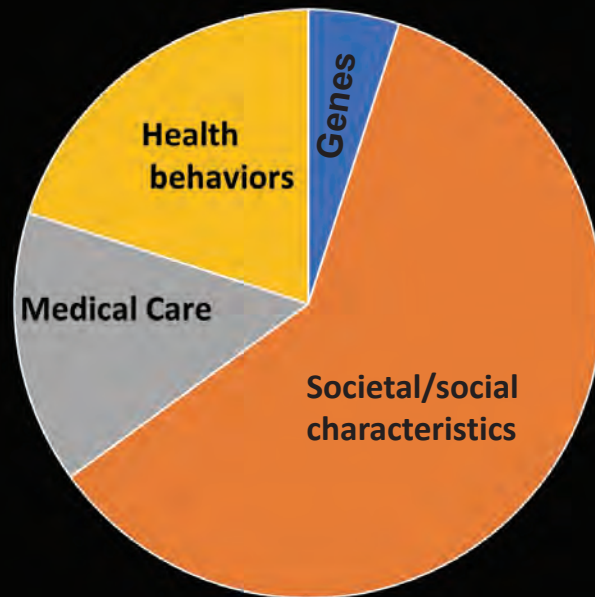
OECD 2018: <https://data.oecd.org/healthres/health-spending.htm>

## How did population Health evolve? Cost cutting strategies

- <1980's: Fee for service
- 1980's -2000: Birth and proliferation of managed care organization
- 2000s-:
  - Accountable Care Organizations (risk sharing)
  - Medical Homes
  - Pay for performance (incentive-based payments)
  - Value based payment systems
  - Population Health (reduce cost, improve outcomes and experience)
  - Precision Medicine



## Population Health Determinants



Adapted from, Alvin R, et al: <https://doi.org/10.1111/j.1749-6632.1999.tb08123.x>

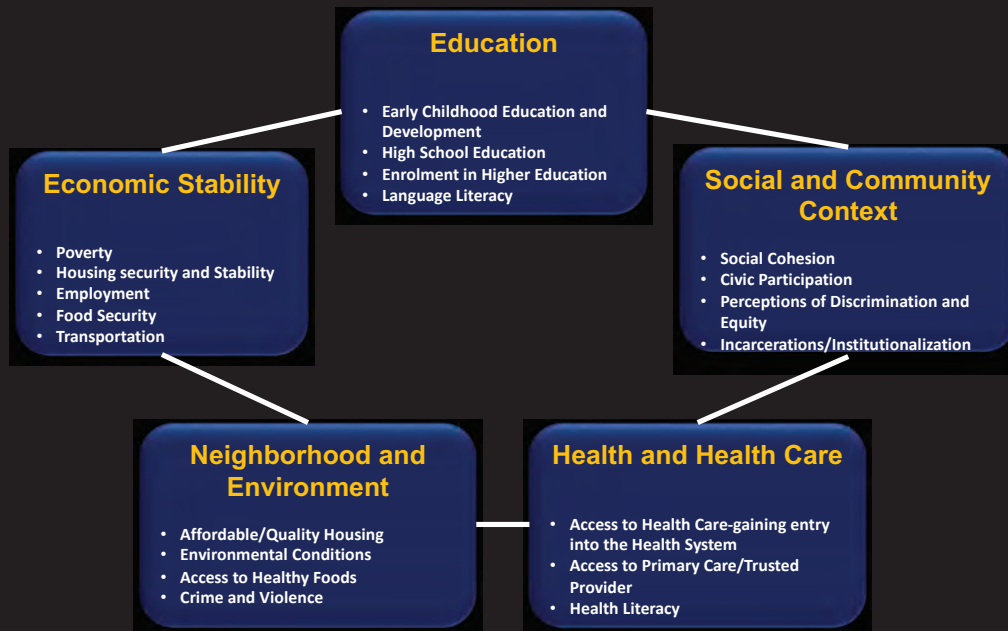
**For Population Health to be effective,  
'Societal Determinants of Health' must be  
addressed**

*Societal determinants of health* is defined as conditions in the social, physical, and economic environment in which people are born, live, work, and age.

<https://www.healthypeople.gov/2010/hp2020/advisory/societaldeterminantshhealth.htm>



## Societal Determinants of Health (SDOH)

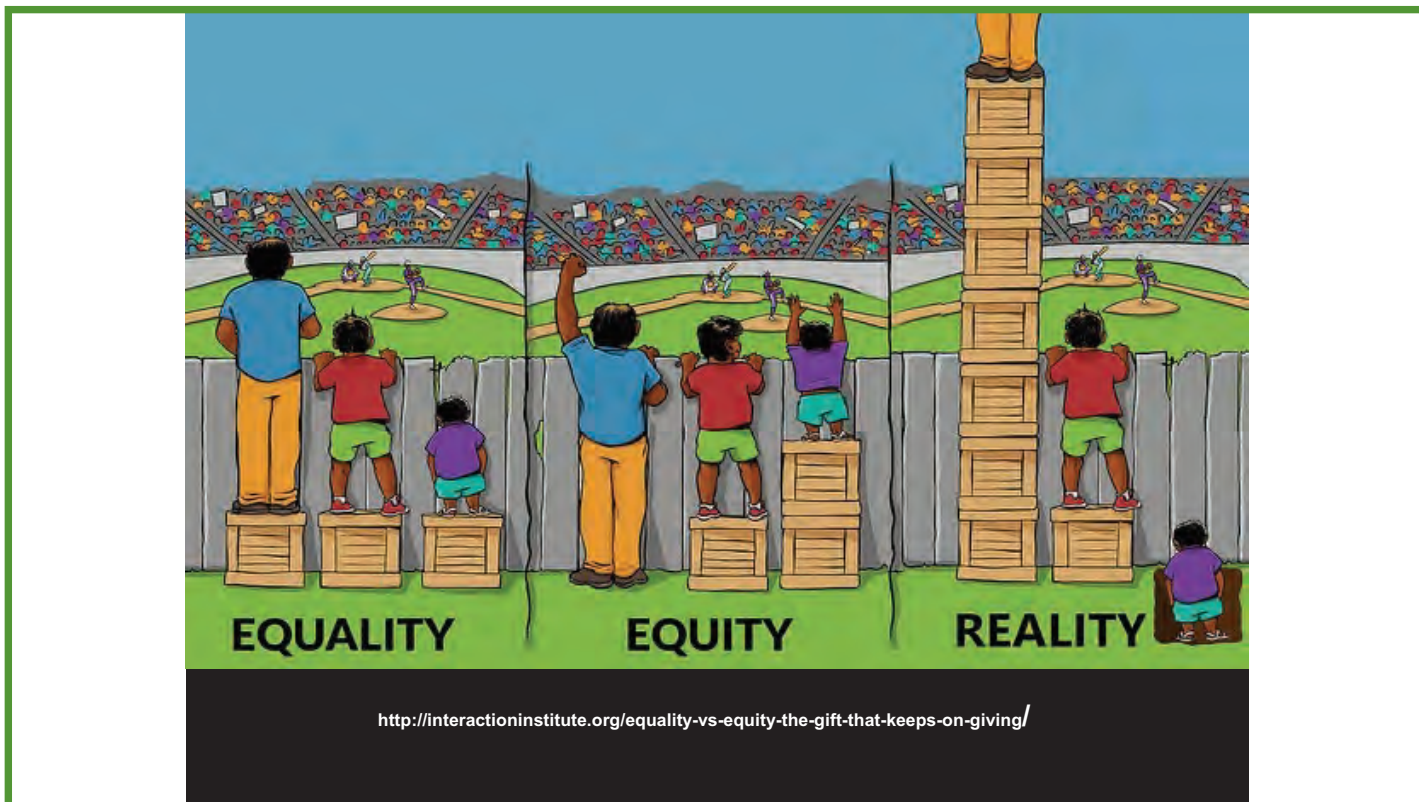


Source: Adapted from Healthy People 2020 , US Department of HHS, 27 July 2019

## When Social determinants of Health are not addressed it results in Health inequities

***Health Inequities:*** differences in health outcomes between groups of people that are considered preventable or unfair

**A example is black men's health**



## Why is health equity so important

### The development of a society can be judged by:

- ✓ The quality & fairness in the distribution of population health
- ✓ The degree of protection provided to the disadvantaged

### Increase Revenue

- ✓ Healthy workforce is a productive workforce
- ✓ College education for all would result in \$1 trillion of savings

### Reduce Costs (Costs between 2003-2006)

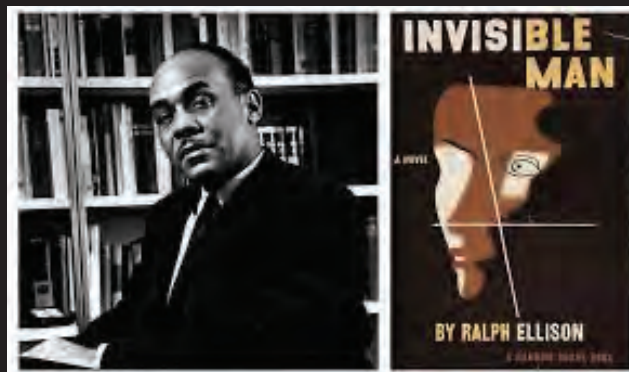
- ▶ Combined costs of health inequities and premature death in the U.S.= **\$1.24T**
- ▶ **30.6%** of direct medical care expenditures for people of color were **EXCESS**
- ▶ costs due to health inequities

LaVeist, Gaskin, and Richard, 2009; Dow and Schoeni, 2008



## **Health inequities are pervasive in Black men's health**

### **Ralph Ellison Invisible Man, 1952**



"I am an invisible man.... I am a man of substance, of flesh and bone, fiber and liquids- and I might even be said to possess a mind. I am invisible, understand, simply because people refuse to see me".



## **Black and male historic stereotype in the USA:**

- Criminality
- Ineptitude
- Poor health behaviors
  - Social experiences
  - Institutional forces and racism
    - De facto segregation
    - Prison industrial complex

**The stereotypes have lead to more health issues for black men compared with black women**

Gilbert, KL et al. Annu. Rev. Public Health 2016. 37:295–311

## **Why are black men invisible and missing? Need for race and gender health agenda**

- 1.5 million black men ages 25 and 54 years are missing from daily life
  - premature mortality 900,000
  - incarceration 625,000
  - Those that return to society are dejected
- There is no particular emphasis on black men's health in clinical studies
- Many black men cannot achieve success in their perceived masculine roles as a result of a cycle of poverty
- Black men in all income groups are 50% less likely to have had contact with physicians during the past year, even when they have health insurance



## **Black men have worse health statistics in USA**

### **Cardiovascular Disease**

- **HTN:** highest rates in the world associated with earlier onset, more severity, poorer control rates
- **KIDNEY DISEASE:** in the 30 to 39 age group, 14 times more kidney disease than whites, overall 4x more than white men
- **HEART DISEASE:** 30% more likely to die from heart disease as compared with white men
- **STROKE:** 60% more likely to die from a stroke than their White adult counterparts

## **Black men have worse health statistics in USA**

### **Cancer**

- **Prostate:** highest rates in the world associated with more severity, poorer control rates
- **LUNG CANCER:** 37% more Likely than White men
- **ORAL CANCER:** More common in in AA with 36% survival in 5yrs c/w 61% in Whites



## Black men have worse health statistics in USA

### Others

- **Diabetes:** 51.7/100,000 compared with 25.6/100,000 in white men
- **HIV:** 7 times prevalence rates and 9 times mortality rates compared with white men
- **Homicide:** 84.6/100,000 compared with 5/100,000 young white men

## Leading causes of death in black men 2017

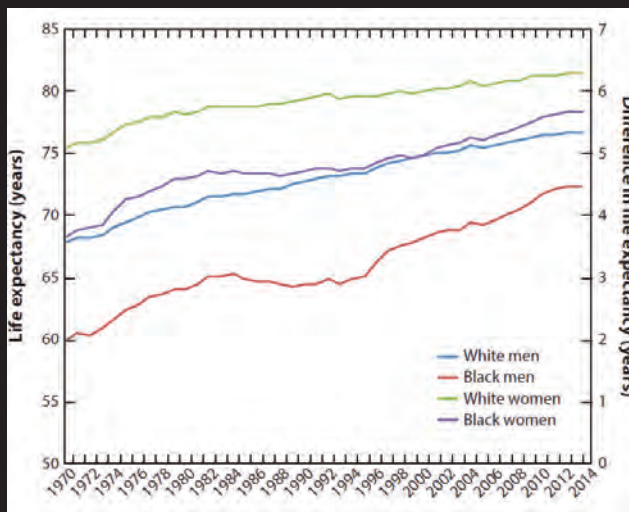
Non-Hispanic black, Male, All ages	Percent
1) Heart disease	23.7%
2) Cancer	20.2%
3) Unintentional injuries	7.9%
4) Homicide	5.0%
5) Stroke	4.9%
6) Diabetes	4.3%
7) Chronic lower respiratory diseases	3.2%
8) Kidney disease	2.6%
9) Septicemia	1.7%
10) Hypertension	1.6%

<https://www.cdc.gov/healthequity/lcod/men/2017/nonhispanic-black/index.htm>





## Overall improvement in life expectancy by race and gender 1970-2013. **BUT black men still remain behind**



CDC. 2015. <http://www.cdc.gov/nchs/>

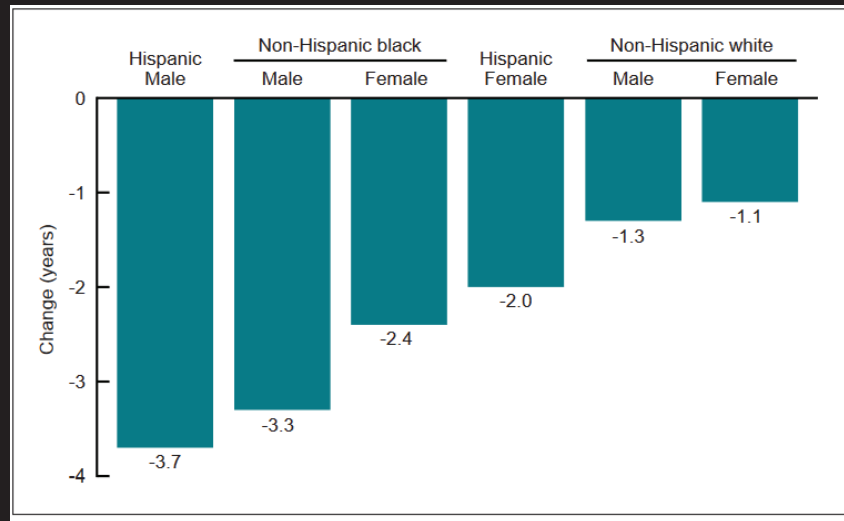
## US Life expectancy by race and gender 2018-2020



<https://www.cdc.gov/nchs/data/vsrr/vsrr015-508.pdf>  
<https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr69-12-508.pdf>

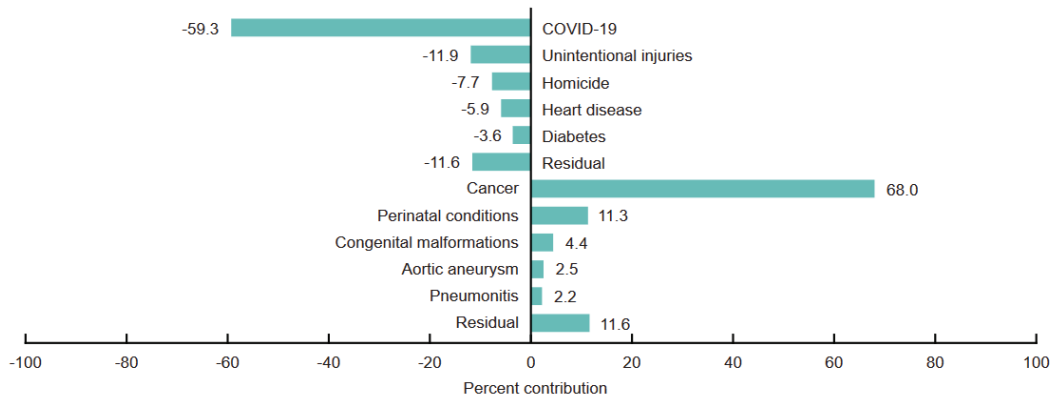


## Life expectancy decline by race



<https://www.cdc.gov/nchs/data/vsrr/vsrr015-508.pdf>

## Contributions of leading causes of death to the change in life expectancy in Black Men



<https://www.cdc.gov/nchs/data/vsrr/vsrr015-508.pdf>



## **Social Determinants of Stress**

**Study:** Focus groups with 150 African American men, ages 30 and older, and eight groups with 77 African American women.

two primary sources of stress in African American men's lives:

- men's desires, efforts, and struggles to fulfill socially and culturally important roles; and
- being both African American and men in a racially stratified society. A central focus of men's daily lives was trying to navigate the various roles and responsibilities they have in different life domains, but this occurred in the context of societal forces that tended to constrain men's choices and make it more difficult for them to successfully fulfill these roles and responsibilities and therefore leads to **unhealthy choices**

*Griffith DM, et al Am. J. Men's Health 7(Suppl.):19S-30S*

## **Early life origins of the race gap in men's mortality**

**Study:** examines early life origins of the race gap in men's all-cause mortality.

**Data Source:** National Longitudinal Survey of Older Men (1966-1990)

### **Findings:**

- Black men's higher rates of death are associated with lower socioeconomic standing in early life and living in homes lacking both biological parents.
- These effects operate through adult socioeconomic achievement processes, as education, family income, wealth, and occupational complexity statistically account for the race gap in men's mortality.

**Implications:** Policy implications for early childhood interventions



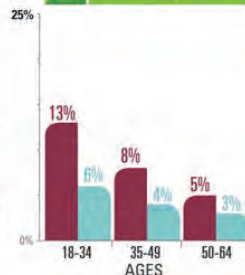
## Root cause of Social Determinants of Health in black men

- **Racial discrimination:**
  - proactive police surveillance, workplace tensions
  - institutional racism: reduced employment prospects, promotion prospects, poor quality education, poor neighborhood conditions, and disproportionate rates of incarceration.
  - racial discrimination leads to adverse health outcomes.

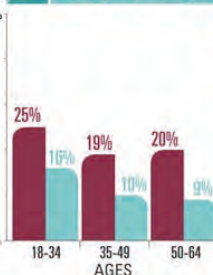
Some social factors and health risks affect African Americans at younger ages.

African American  
White

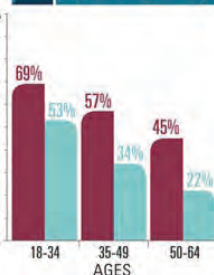
### Unemployment



### Living in poverty



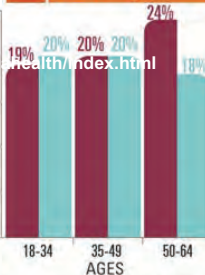
### No home ownership



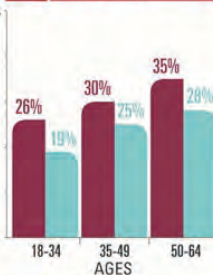
### Could not see an MD because of cost



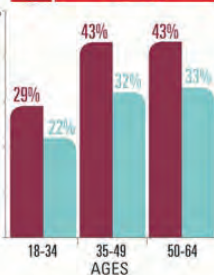
### Smoking



### Not active



### Obesity



SOURCES: Behavioral Risk Factor Surveillance System, 2015; American Community Survey of the US Census Bureau, 2014.



## Social Determinants of Health Behavior

### Psychosocial stress

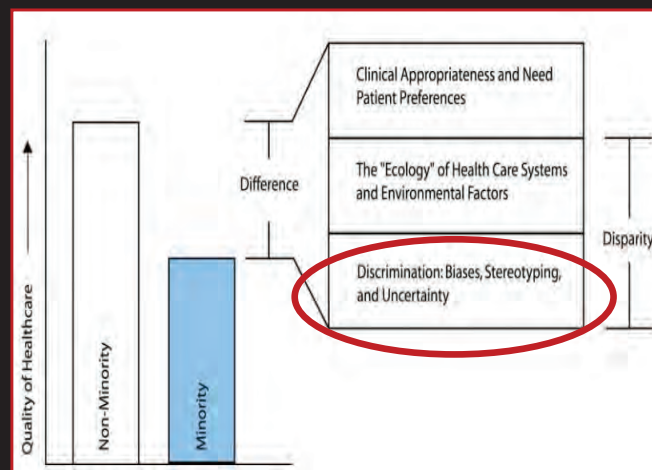
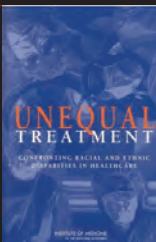
- impact on health behavior, eating, smoking, lack of exercise
- Affects men's decision to see primary care physicians

### Environment

- lack of recreational facilities and concerns about personal safety leads to poor physical activity
- abundance of unhealthy products such liquor in black census tracks can yield unhealthy behavior

## Social determinants of Health Care

### Are there racial differences in quality of healthcare? (IOM 2003)



Differences, Disparities and Discrimination:  
Populations with Equal Access to Healthcare  
Gomes and McGuire, 2003



## Consequences of Implicit Bias in Healthcare Clinical Examples:

Minorities are less likely than whites to receive needed services, including:

- clinically necessary procedures
- Cancer
- **Cardiovascular disease**
- HIV/AIDS
- Diabetes
- mental illness
- routine treatments for common health problems
- Pain relief

**lower quality in health services provided to African-American men are due to a lack of cultural competency and a lack of diversity in the health care workforce.**

Differences, Disparities and Discrimination:  
Populations with Equal Access to Healthcare  
IOM: Gomes and McGuire, 2001

## The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization



A total of 720 physicians at national meetings of organizations in the field of cardiac care physicians participated in the survey. Each physician viewed a video of a standardized interview and was given information about a hypothetical patient or she then made recommendations about that patient's care.

### RESULTS

- **Blacks and women less like to be referred**
- **Black women less likely to be referred**

Schulman KA et al. N Engl J Med 1999; 340:618-626



## **SOLUTIONS ARE COMPLEX**

### **The intersectionality of the complex factors in addressing black men's health**

Health is created and maintained by all



## **SOLUTIONS ARE COMPLEX**

### **Research and programs**

- More research into social determinants of health among African-American men.
- Diverse workforce in health policy researchers is needed.

### **Social policy:**

Promote social policies which address social and environmental issues affecting African-American men (e.g racial discrimination, low socioeconomic status and incarceration).

- strengthening anti-discrimination legislation in the area of employment
- strengthening safety-net systems for low-income workers
- establishing systems to tackle racial biases in the criminal justice system.

### **Health Policy**

- Improve cultural sensitivity in health services
- increase the diversity of the health care workforce to include African-American men



## Summary

- The cost of healthcare in the USA is simply too high and not sustainable long-term
- Population health strategies, founded on value-based payment systems, offers a promising method to improve quality, reduce cost and improve patient experience
- Addressing social determinants of health, is a population health strategy that is critical, particularly in health of black men
- Solutions specific to black men must incorporate early childhood interventions, addressing discrimination and improving diversity of the workforce.







# Women's Health: Disparities in the Caribbean Population Locally and Globally

Ambereen Sleemi, MD, MPH  
Urogynecologist, Executive Director  
International Medical Response  
September 10, 2022

## Purpose and Objectives

### PURPOSE

*Discuss the health disparities in caring for women in the Caribbean.*

### OBJECTIVES

- Understand women's health disparities in the Caribbean
- Outline factors leading to disparities
- Demonstrate solutions to alleviate these disparities

### FINANCIAL DISCLOSURE

*None*



## Topics to be Covered

- Global state of women's health
- Maternal health
  - Death and disability
- Gynecologic Health
  - Cancers
  - Uterine conditions
    - Fibroids
    - Endometriosis
  - Prolapse and Incontinence
- Overall health
  - Chronic conditions

3

## International Medical Response

- Founded in 2013
- To support and enhance healthcare systems through local partnerships
- Support surgical training focused on fistula and pelvic reconstruction
- Current programs in Haiti, Liberia, Malawi

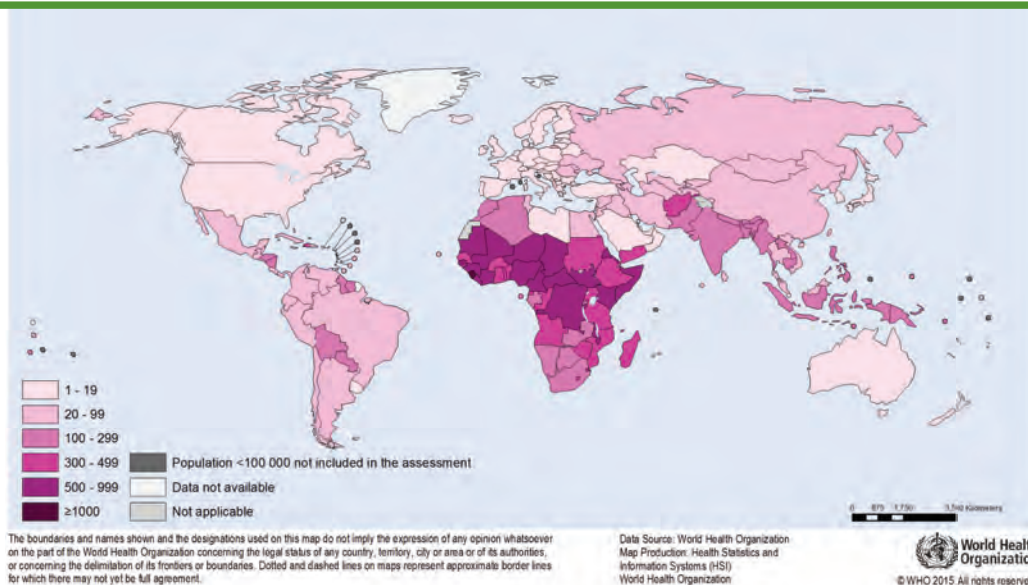




# Global State of Women's Health

- Maternal Health
  - How are we doing in caring for pregnant women?
  - Depends where you are born
  - Access to maternal care

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## Where is it deadly to have a baby?

MMR per 100,000 live births, 2008



## Current State of Global Maternal Affairs

- Birth around the world: 800 women die/day due to pregnancy related complications; leading cause of death in 15–19-year-old adolescents
- Current rates of maternal mortality - 1 maternal death every 2 minutes (cut by 44% from 1990-2015) Alkema, et al 2015
- 99% in SSA
- “Women are not dying of diseases we can’t treat...They are dying because societies have yet to make the decision that their lives are worth saving”- former FIGO President, Mahmoud Fathalla



## Caribbean Maternal Health

- Rates of mortality
- Rates in the diasporic populations
  - Maternal Health in the USA
  - Increased rates in minority populations



## Gynecologic Conditions

- Health disparities in rates of cancer detection
  - Cervical cancer
  - Endometrial cancers
- Deaths from cancer
  - Disparities in death rates for gynecologic cancers
  - Breast cancer and health disparities

## Cervix Cancer

- Rates of screening in global populations
- Screening in Caribbean populations
  - Locally
  - Globally
- Access to treatment
- Vaccine prevention



## Endometrial Cancers

- Rates of screening in global populations
- Screening in Caribbean populations
  - Locally
  - Globally
- Access to treatment

## Breast Cancer

- Rates of screening in global populations
- Screening in Caribbean populations
  - Locally
  - Globally
- Access to treatment
- Vaccine prevention



## Gynecologic Conditions

- Uterine Fibroids
  - Rates of distribution
    - Global occurrence
  - Disparities in access to care
    - Surgical
    - Non-surgical
    - Health sequelae

## Gynecologic Conditions

- Endometriosis
  - Diagnosis
  - Treatment
- Adenomyosis
  - Diagnosis
  - Treatment



## Gynecologic Conditions

- Pelvic Organ Prolapse
  - Diagnosis
  - Treatment
  - Access to care
- Urinary Incontinence
  - Diagnosis
  - Treatment
  - Access to care

## Pelvic Organ Prolapse

- Diagnosis
- Treatment
- Occurrence in the Caribbean population
  - Access to care





## Urine Incontinence

- Diagnosis
- Treatment
- Occurrence in the Caribbean Population
  - Access to treatment
  - Disparities in care
  - “natural” aging

## Women’s Health

- Overall disparities in women’s health care:
  - Heart disease/stroke
    - Lack of diagnosis
    - Access to care
    - Death and disability
  - Other chronic conditions



## Summary

- Overall disparities exist in caring for women globally
- Local disparities in the Caribbean population exist
  - Awareness
  - Vigilance
  - Advocacy

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## Thank you!

Email: [info@internationalmedicalresponse.org](mailto:info@internationalmedicalresponse.org)

IG: @internationalmedicalresponse

Twitter:

@IMR\_MedResponse

@globalgyno





# Telementoring: A Mechanism to Reduce Health Disparities in Children (and Beyond)

Steve Caddle, MD MPH, FAAP  
Associate Professor of Pediatrics  
Columbia University Irving Medical Center  
September 10, 2022

## Purpose and Objectives

### PURPOSE

*To share a model of healthcare delivery that demonopolizes knowledge and improves access to healthcare*

### OBJECTIVES

- To describe different types of telementoring
- To share a unique model of telementoring
- To describe ways in which telementoring is leveraged in pediatrics and beyond

### FINANCIAL DISCLOSURE

*None*



## Abbreviated New Orleans Acknowledgment

- We acknowledge and pay tribute to the original inhabitants of this land. The city of New Orleans is a continuation of an indigenous trade hub on the Mississippi River, known for thousands of years as *Bulbancha*. Native peoples have lived on this land since time immemorial, and the resilient voices of Native Americans remain an inseparable part of the local culture. With gratitude and honor, we acknowledge the indigenous nations that have lived and continue to thrive here.
- Credit: Tulane University

## Agenda

- Telementoring review
- Telementoring: the ECHO Model™
- American Academy of Pediatrics and Project ECHO®
- AAP ECHO® Projects



## Telementoring Models

Telementoring, or technology-enabled mentoring, is the use of telecommunication technology to deliver training, education and support that builds health care capacity. Telementoring shares **best practices** with rural and remote areas and **increases the capacity of the health workforce** in these communities



### ECHO

Hub-and-spoke model using videoconferencing to connect a team of subject-matter experts with community-based health care workers. Sessions include didactics, deidentified case presentations, and interactive discussion.



### Individual Consultation

Structured one-on-one interactions through telephone or videoconference between a specialist and a health care worker to inform clinical care delivery



### Webinars

Live audiovisual expert presentations delivered by an individual or panel with a discussion and interactive question and answer component



### Podcasts

Audio (or audio with visual enhancements) broadcasts distributed through the internet and able to be consumed via platforms such as web pages and handheld devices



### Online Modules and Curricula

Self-paced, self-directed learning through online modules that consist of a series of slides with or without accompanying audio



### Adapted Community Health Clubs

Peer-to-peer support via the formation of facilitated health clubs consisting of health care workers that meet regularly to educate about a specific health care issue.

Credit: Rural Telementoring Training Center. <https://ruraltelementoring.org>

## PROJECT ECHO®





## Telementoring: the ECHO Model™

- Project ECHO® (Extension for Community Healthcare Outcomes) is an innovative telementoring program designed to create virtual communities of learners by bringing together healthcare providers and subject matter experts using videoconference technology, brief lecture presentations, and case-based learning, fostering an “all learn, all teach” approach.
- Participants are engaged in the bi-directional virtual knowledge network by sharing clinical challenges and learning from experts and peers.

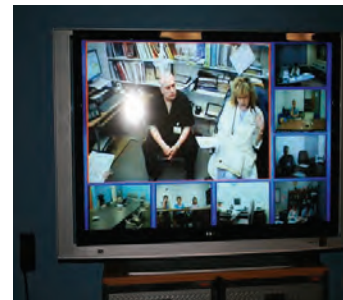
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### HUB AND SPOKE MODEL



Multidisciplinary Team of Specialists at  
the Academic Medical Center

**HUB**



Remote and rural clinicians join  
via webcam or phone

**SPOKES**



## TELEMEDICINE VS. TELEMENTORING

- Direct patient care
- Smaller number of patients served in one clinic
- Provides care within a medical home
- No patient
- Larger number of patients touched in one clinic
- Builds capacity of primary care doctors

## BENEFITS OF TELEMENTORING

### PROVIDERS

- No cost CME and CEU, access to multi-specialists
- Increase professional satisfaction
- Medical home concept is maintained
- Become confident in treating a health condition
- Engage in QI initiatives

### PATIENTS

- Access to high quality, culturally-effective care within the medical home
- Close to home
- By someone they trust (their primary care provider)
- Patient satisfaction



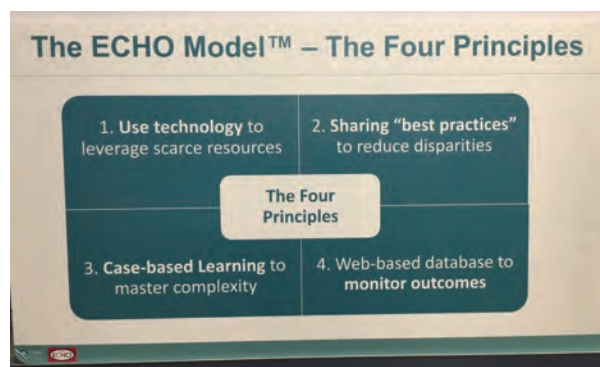
## SUCCESS OF ECHO<sup>®</sup>

- 787 hubs in 59 countries
- >807,000 unique learners
- ~11,000 cities
- 191 countries (and includes sites within Department of Defense healthcare systems)



## Telementoring: the ECHO Model<sup>™</sup>

- Unlike telemedicine, this tele-mentoring model does not foster a health care provider and patient relationship. ECHO follows these four key principles:







## AAP and ECHO<sup>®</sup>

- The American Academy of Pediatrics serves as an ECHO<sup>®</sup> Superhub, which is a pediatric training arm of the ECHO<sup>®</sup> Institute. In this role, the AAP trains and supports partner organizations to serve as hubs.
- The mission of the AAP ECHO<sup>®</sup> Superhub is to utilize the ECHO Model<sup>™</sup> to achieve optimal physical, mental, and social health and well-being of all children by sharing best practices and building capacity among all pediatric providers.

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### AAP ECHO<sup>®</sup> SUPERHUB





## AAP and ECHO®

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- The AAP ECHO® team:
  - Conducts ECHO® immersion trainings for individuals and organizations interested in implementing pediatric-focused ECHOs®
  - Builds a community of learners by fostering interprofessional collaboration and sharing best practices in pediatric care
  - Serve as a resource center, whereby AAP staff
    - Provide technical assistance
    - Assist with curriculum development for various chronic health conditions
    - Create and expand partnerships

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## AAP and ECHO®

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- My ECHO® journey
  - Immersion training in Albuquerque, 2016



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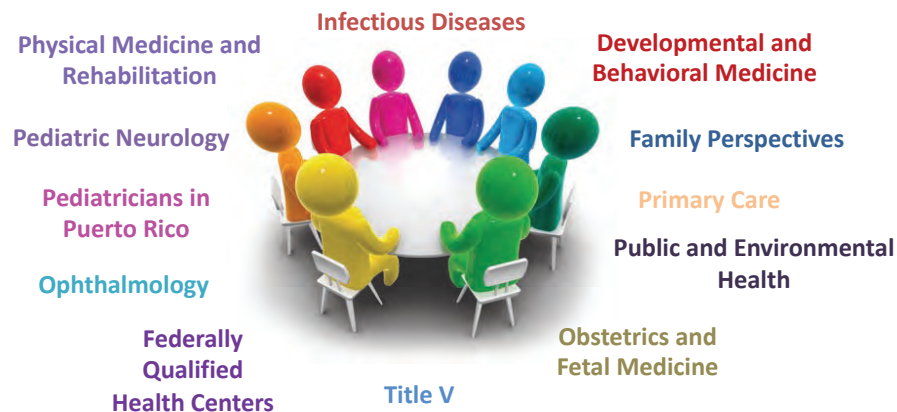


## AAP and ECHO<sup>®</sup>

- My ECHO<sup>®</sup> journey
  - Immersion training in Albuquerque, 2016
  - Project ECHO<sup>®</sup> Zika 2017-18
  - Project ECHO<sup>®</sup> COVID 2020
  - Project Firstline: IPC ECHO<sup>®</sup> 2020-21
  - Project Firstline: IPC ECHO<sup>®</sup> 2021
  - Project Firstline: IPC QI ECHO<sup>®</sup> 2021-22
  - Disaster Management, Equity, Diversity, and Inclusion ECHO<sup>®</sup> 2022

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## FACULTY AND ADVISORY COMMITTEE





# ECHO<sup>®</sup> SESSIONS

## Each session will include:

- Introductions (5 min)
- Didactic (20 min)
- Case presentation (30 mins)
- Wrap-up (5 min)

## ECHO<sup>®</sup> ZIKA CURRICULUM

History and Incidence  
Zika 101  
Evaluation of Infants  
Psychosocial Support



Congenital Abnormalities  
Treatment Options  
Prevention, Testing,  
and Screening  
Other Topics as Needed



## PARTICIPANT QUOTES

As a result of this clinic, I am going to make the following changes in my practice...

“*Incorporate the maternal screening algorithm*”

“*Stay up to date on evolving recommendations*”

“*Amend policy and procedures*”

“*Improve prenatal history questions in the first neonatal visit*”

## ECHO<sup>®</sup> Outcomes

### **Developmental Effects in Children Born to Zika-Infected Mothers: Care, Support, and Services for Children and Families**

Authors are Hub Faculty on AAP Project ECHO<sup>®</sup> Zika:

*Steve Caddle, MD, MPH, FAAP, Assistant Professor of Pediatrics at Columbia University Irving Medical Center and Abigail LH Kroening, MD, FAAP, Assistant Professor of Pediatrics at University of Rochester (Rochester, NY).*

In 2016, the Brazilian Ministry of Health alerted the international community to the neurodevelopmental effects of congenital Zika virus (ZIKV) after recognizing a surge in cases of congenital microcephaly. The Ministry documented 147 cases of congenital microcephaly in 2014. This number soared to 1950 confirmed cases in 2015, prompting the WHO declaration of ZIKV as a public health emergency.<sup>1</sup> The neurotropic predilection of ZIKV led to a new group of congenitally-infected Children with Special Health Care Needs (CSHCN) that require specialized care and follow-up. Many ZIKV-affected babies are now at key ages for developmental screening, evaluation, and early interventions. Through our work with AAP Project ECHO<sup>®</sup> Zika, we appreciate the neurodevelopmental complexity of these children and also the resources available to support ZIKV-affected families in the United States (US), US territories (Puerto Rico, American Samoa, US Virgin Islands), and Brazil.

*In utero* exposure to ZIKV can lead to infants who are asymptomatic, have mild neurodevelopmental abnormalities, or have Congenital Zika Syndrome (CZS). CZS is a constellation of findings including: (1) severe microcephaly with partially collapsed skull, (2) thin cerebral cortices with subcortical calcifications, (3) macular scarring and focal pigmentary retinal mottling, (4) arthrogyposis (congenital contractures), and (5) marked early hypertonia. Congenital ZIKV infection is also associated with irritability, seizures, dysphagia, optic nerve hypoplasia, hearing loss, and more.<sup>2</sup>



## ECHO<sup>®</sup> Outcomes

### Developmental Effects in Children Born to Zika-Infected Mothers: Care, Support, and Services for Children and Families

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## ECHO<sup>®</sup> Outcomes

### The Power of Connections: AAP COVID-19 ECHO Accelerates Responses During a Public Health Emergency

Henry H. Bernstein, DO, MHCM, FAAP; Trisha Calabrese, MPH; Peter Corcoran, MPH;  
Laurence E. Flint, MD, MS, MBA, FAAP; Flor M. Munoz, MD, MSc, FAAP; for the COVID-19 ECHO Workgroup

In addition to the authors, the COVID-19 ECHO Workgroup included Laura Aird, MS; James F. Bale Jr, MD, FAAP; H. Dele Davies, MD, MS, MHCM, FAAP; Jessica Leffelman, BS; Shannon Limjuco, MPH.

#### ABSTRACT

**Context:** Pediatric providers across the United States have sought guidance on how to care for the nation's children during the uncertain historic times of the COVID-19 pandemic. The health care community has been challenged by the unprecedented burden of caring for patients when they have evolving guidelines and limited information about the effects of the virus on children.

**Program:** In response, the American Academy of Pediatrics (AAP) rapidly launched a national initiative to increase child health professionals' knowledge, skills, and self-efficacy. This COVID-19 ECHO (Extension for Community Healthcare Outcomes) program created communities of learners among child health professionals and subject matter expert faculty using didactic and case-based presentations that foster an "all-teach, all-learn" approach.

**Implementation:** The initial AAP COVID-19 ECHO program hosted more than 900 participants in 127 individual virtual sessions, with approximately 25 participants per session. The evolving nature of the pandemic necessitated dynamic and continuous bidirectional flow of concerns and information relevant to participants. Session topics were selected in a



# ECHO<sup>®</sup> Outcomes

ORIGINAL ARTICLE

## Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D., Paulina Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A., Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A., et al.

Article [Figures/Media](#)

[Metrics](#)

June 9, 2011

N Engl J Med 2011; 364:2199-2207

DOI: 10.1056/NEJMoa1009370

[25 References](#) [632 Citing Articles](#)

- 57.5% of the patients treated at the UNM HCV clinic (84 of 146 patients) and 58.2% of those treated at ECHO sites (152 of 261 patients) had a sustained viral response (P=0.89)
- Among patients with HCV genotype 1 infection, the rate of sustained viral response was 45.8% (38 of 83 patients) at the UNM HCV clinic and 49.7% (73 of 147 patients) at ECHO sites (P = 0.57)
- Serious adverse events occurred in 13.7% of the patients at the UNM HCV clinic and in 6.9% of the patients at ECHO sites

## AAP Project ECHO<sup>®</sup>

- Recent/current AAP ECHOs<sup>®</sup>
  - Anxiety and Depression ECHO<sup>®</sup>



## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®
  - Food Insecurity ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®
  - Food Insecurity ECHO®
  - Infection Prevention and Control ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®
  - Food Insecurity ECHO®
  - Infection Prevention and Control ECHO®
  - Neurodevelopmental Screening ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®
  - Food Insecurity ECHO®
  - Infection Prevention and Control ECHO®
  - Neurodevelopmental Screening ECHO®
  - Obesity ECHO®

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## AAP Project ECHO®

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- Recent/current AAP ECHOs®
  - Anxiety and Depression ECHO®
  - Early Childhood Mental Health ECHO®
  - Addiction Screening in the Pediatric Setting ECHO®
  - Food Insecurity ECHO®
  - Infection Prevention and Control ECHO®
  - Neurodevelopmental Screening ECHO®
  - Obesity ECHO®
  - Social Determinants of Oral Health ECHO®

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## AAP Project ECHO®

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- Upcoming AAP ECHOs®
  - National Rural Adolescent and Child Health (NRACH) ECHO® Training Center

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## Summary

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- Telementoring is a way to build healthcare capacity by sharing best practices and increasing the capacity of the remote providers to treat patients
- The Project ECHO® model is a form of telementoring that has been shown to be effective in reducing disparities of access to specialized care
- The use of ECHOs® in pediatrics and in public health increase the scope of treatment for unique populations and address public health emergencies

## References

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- AAP Project ECHO®: <https://www.aap.org/en/practice-management/project-echo/>
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## About Healthfirst

Healthfirst is New York's largest not-for-profit health insurer, earning the trust of 1.8 million members by offering access to affordable healthcare. Sponsored by New York City's leading hospitals, Healthfirst's unique advantage is rooted in its mission to put members first by working closely with its broad network of providers on shared goals. Healthfirst takes pride in being pioneers of the value-based care model, recognized as a national best practice. For nearly 30 years, Healthfirst has built its reputation in the community for top-quality products and services New Yorkers can depend on.

It has grown significantly to serve the needs of members, offering market-leading products to fit every life stage, including Medicaid plans, Medicare Advantage plans, long-term care plans, qualified health plans, and individual and small group plans. Healthfirst serves members in New York City and on Long Island, as well as in Westchester, Sullivan, and Orange counties.

For more information on Healthfirst, visit [healthfirst.org](https://www.healthfirst.org).

## Howard University College of Medicine

Founded in 1868, the College of Medicine takes pride in its long and illustrious history of training students to become competent and compassionate physicians who provide health care in medically underserved communities.

While the College offers excellent research and research training opportunities, the major emphasis is on preparing students to deliver patient care in communities that have a shortage of physicians and public health professionals.

The College living alumni, more than 4,000, are a testimony that an excellent medical education can be obtained at Howard. Although opportunities for minority students have increased at other medical schools, the College uniquely addresses the special health care needs of medically underserved communities and continues to produce a significant number of the nation's minority physicians. The College is a part of Howard University, a comprehensive research university. While the University community has traditionally been predominantly black, Howard has been an interracial and cosmopolitan institution throughout its history, with students, faculty and staff of all races and from many foreign nations. All must meet the high standards



of excellence of Howard University, which has the largest concentration of black faculty and student scholars in the country.

In addition to the College of Medicine, the Howard University Health Sciences Center includes the Howard University Hospital; the College of Dentistry; the College of Pharmacy, Nursing and Allied Health Sciences; the Louis Stokes Health Sciences Library; and the Student Health Center. Located in the nation's capital, the College can draw upon the immense medical resources of this area, including the National Institutes of Health and the National Library of Medicine.

## **MediNova**

### **Our Mission**

We have a two-part mission:

To provide accessible, high-quality medical treatment to the underserved communities of Northeastern Haiti in a manner that protects the dignity and independence of our patients with the highest standards of integrity, impartiality and openness.

To advance the field of primary medical care in the community by providing educational opportunities for both current and future local medical practitioners.

### **Our Vision**

We are seeking to advance the continued growth, advancement and sustainability of medical care in the region by both directly providing primary care to underserved communities and individuals in a manner reflecting our commitment to respect, excellence and integrity in addition to training future and current local medical practitioners in the latest and most effective means of treatment.

We believe that all individuals have the right to the highest attainable standard of physical and mental health, which includes access to medical services.





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