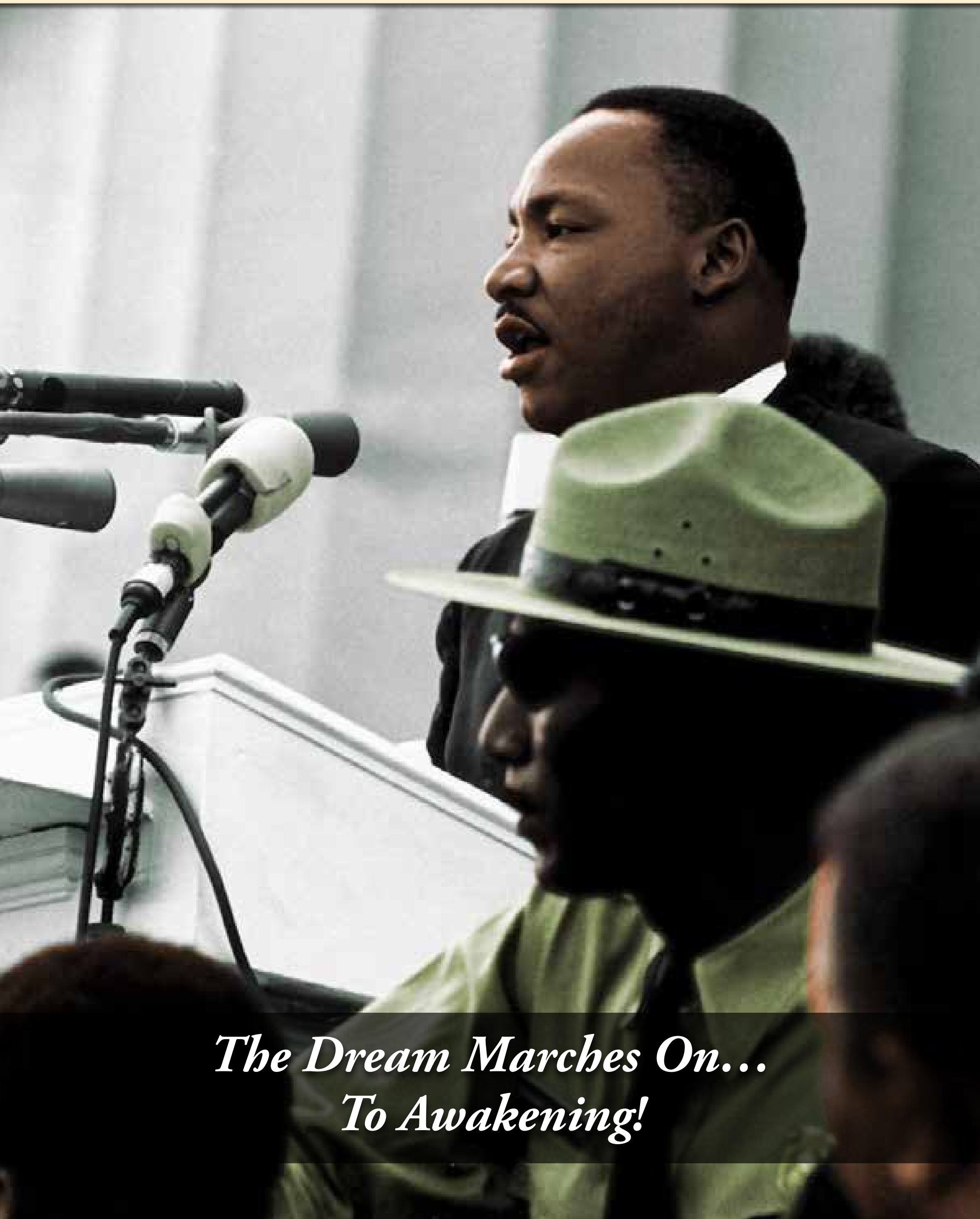
Volume IX, Number 1 Spring 2023

Journal of Health and Human Experience



The Dream Marches On…
To Awakening!

Special Attributions

This edition of the Journal raises up this year's 60th anniversary of Dr. Martin Luther King, Jr's, "I Have a Dream" speech during his leadership of the March on Washington on August 28, 1963. The photograph used for the front cover of this edition is that of Dr. King during his speech. It is a colorized version of the original. It is listed as in the public domain on Wikimedia Commons where attributions are found: https://commons.wikimedia.org/wiki/File:Martin_Luther_King_-_March_on_Washington_colorized_photo.jpg.

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Journal of Health and Human Experience

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Library of Congress Registration
January 27, 2015
ISSN 2377-1577 (online)

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The Journal is registered with the Library of Congress. ISSN 2377-1577 (online)

The Journal is an interdisciplinary, academic, peer reviewed international publication. Its mission is to explore the full expanse of holistic and integrated health within the nature and meaning of human experience. Its scholarly and professional explorations richly convene all possible areas within the arts/humanities and the sciences, cultural and social concerns, diverse technologies, ethics, law, civil rights, social justice, and human rights. The Journal invites the reader into the fullness of our human nature, our history, and the expanding futures before us.

The Editorial Leadership enthusiastically welcomes academic and research investigations, reviews, commentaries, creative writing such as poetry/short stories, new and emerging scholar submissions, and other possibilities.

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A full description of the Journal's mission, expanse, leadership, author requirements and additional general information can be obtained at: http://JHHE.sempervifoundation.org

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Prepared by Graphic Arts and Publishing Services at
The Henry M. Jackson Foundation
for the Advancement of Military Medicine, Inc.

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MISSION

The Semper Vi Foundation

"From Victim to Survivor to Victor"

Mission: The Semper Vi Foundation is a 501(c)(3) tax exempt public charity dedicated to the design, development, implementation, and promotion of social justice and human rights resources, programs, and diverse opportunities in education, publishing, research, and services that help the suffering find healing and meaning in their lives. Of particular interest for the Foundation's mission is Wounded Warrior Care and, equally, the care of all those who suffer in our wounded world.

Vision: Semper Vi reaches out to all who have known the many forms of life's suffering and tragedy. Semper Vi activities and opportunities seek to help all those who suffer, not only to survive, but also to become victorious so that their wounds become sources of healing for others. Semper Vi assists those who have benefited from our programs and activities to help others in need. Some of those who benefit from Semper Vi's humanitarian and relief commitments include our Wounded Warriors and their families, as well as individuals and communities who have experienced violence and terrorism, victims of assault and destruction, those who have suffered discrimination and the loss of their human or civil rights due to religion and values systems, race, gender, sexual orientation, socio-economic status, national origin and ethnicity.

Values: Those who become involved with Semper Vi programs practice the Foundation's three core values: *Learning*, *Healing*, and *Serving*. Foundation participants seek to show those who have suffered that healing can be theirs especially when their stories and experiences become sources of comfort and care for others

Programs: Semper Vi Foundation activities are organized into four programs.

> ***Education:*** The Semper Vi Foundation convenes a community of international, interdisciplinary scholars and professionals who develop and promote a wide range of educational programs and resources for enrichment in the humanities, health and healthcare, the physical and social sciences, human development and human rights

across the globe. This Founation designs and provides workshops, seminars, webinars, podcasts, full conferences and continuing education courses at various international locations. Depending on resources, events are filmed and posted on the website.

Publication: The Semper Vi Press publishes the Journal of Health and Human Experience. It also publishes a wide variety of academic and professional books, periodicals, newsletters, and other resources serving the Foundation's mission and constituents.

Research: The Foundation serves as a sponsored projects college for investigators looking to promote a wide variety of academic and professional domains of inquiry. The Foundation promotes such programs in collaboration with various global universities, centers and institutes.

Social Justice Services: The Foundation serves as a gathering point for individuals and communities who design and promote diverse social justice services and resources supporting human and civil rights. The Foundation supports already existing approaches and promotes the invention and launching of new services to meet emerging social justice needs across the globe.

Reflection: Tales of heroes abound throughout world literature. Our attention is always captured by the stories of those who accomplish great deeds that benefit others and the world. Yet what is it that we mean by the term, "hero?" When is something "heroic?" A hero is one who, despite danger and weakness, musters the courage to sacrifice herself or himself for the needs of others. Sometimes this comes at the price of the hero's life. However, in all instances, the hero vanquishes the danger and rises above it as victor. Yet there is another nuance. The work of the hero often goes deeper. In many tales, the hero not only fights the oppressor, but also suffers grievous wounds in doing so. The hero embodies the suffering and takes it into her or him self. The hero endures and survives. Yet even more amazingly, in these stories the suffering and pain are transformed from curse to blessing. The hero matures from victim to survivor to victor! The hero becomes *"semper victorius!"* Always the victor!

Invitation: Join us as we build Communities of Victors, for today and tomorrow!

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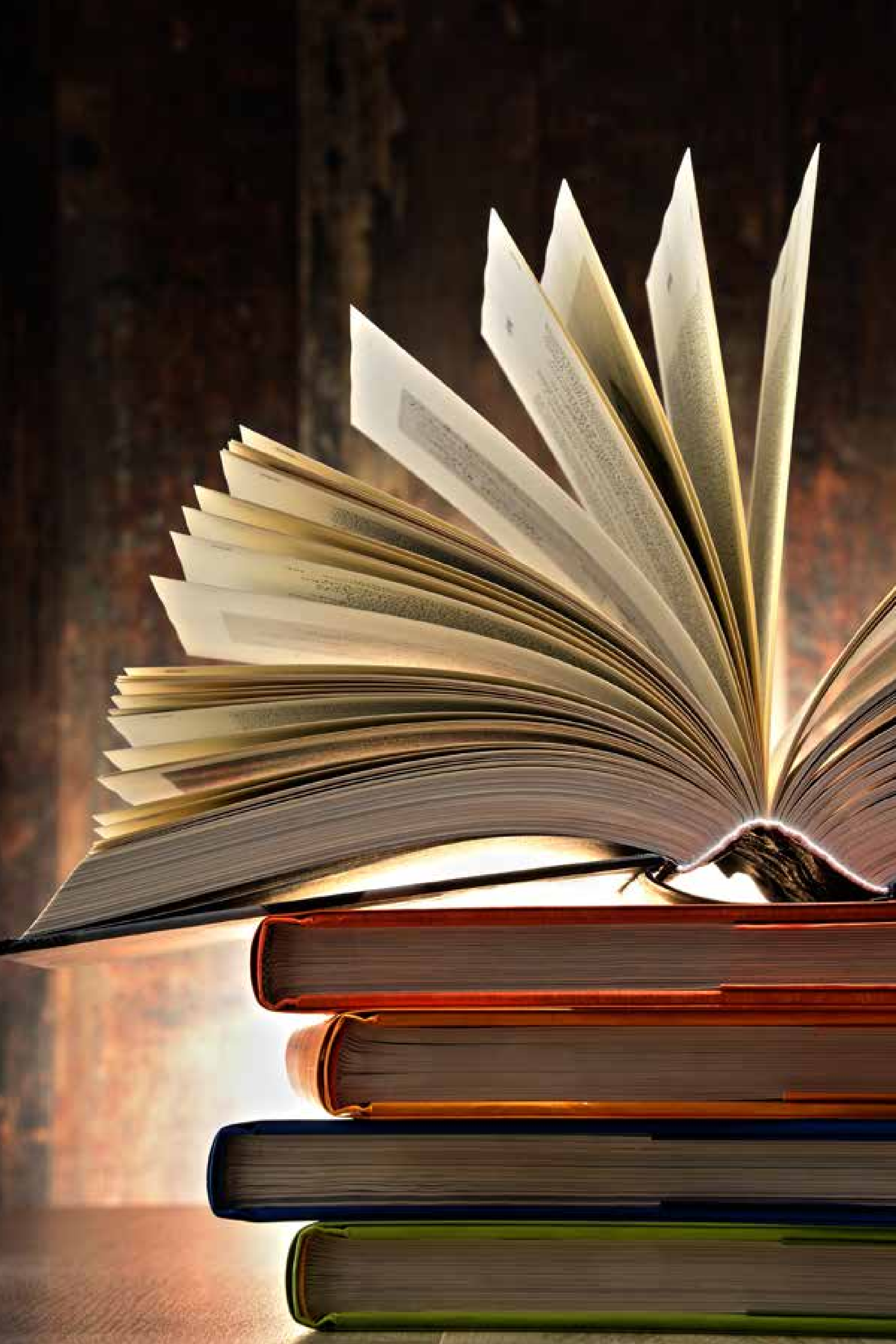

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Charles Brown, PhD, MEd, is an Associate Professor of Public Health in the Department of Public Health, Health Administration and Health Sciences at Tennessee State University. Dr. Brown has a background in teaching and conducting behavioral science research among underserved populations. Dr. Brown also serves as a program evaluator and provides oversight on evaluation studies focused on health care service delivery, quality improvement processes, and the integration of primary and behavioral health care.

Lauren Franklin, BS, completed undergraduate studies at the University of New Mexico, majoring in community health education. She is Certified as a Health Education Specialist and is currently completing her Master of Public Health degree at Tennessee State University. As a graduate student, she has worked collaboratively with faculty to present at professional conferences, conduct research studies, and implement evaluation activities on a funded grant program.

Edward F. Gabriele, DMin, is President & Chief Executive Officer of the Semper Vi Foundation and the Journal's Editor-in-Chief. Dr. Gabriele has been a long-term educator in the humanities on all educational levels including leadership as an adult education curriculum inventor. He has held various executive positions in ethics, research and human rights. His services in these areas have been provided across the globe. Dr. Gabriele is extensively published and is an international visiting scholar.

Jan Herman, MA, holds a master's in History from University of New Hampshire where he also studied under a Ford Foundation Teaching Fellowship. He is the retired Special Assistant to the Navy Surgeon General for Medical History and Archivist. He has produced many Navy Medicine historical documentaries including "*The Lucky Few*" premiered at the Smithsonian in 2010. He is the 2015 recipient of the lifetime achievement Forrest C. Pogue Award for Excellence in Oral History.

Preface

Shirley Ann Higuchi, JD, Chair of the Heart Mountain Wyoming Foundation, is the daughter of former Heart Mountain incarcerees. Fulfilling her mother's final wish, Shirley was elected Chair of the HMWF Board and helped establish an onsite museum. Outside Heart Mountain, she is Associate Chief of Professional Practice for Justice, Legal & State Advocacy, American Psychological Association. She has led a long and distinguished legal career, and stays active in the District of Columbia Bar.

Mary Lambert, DNP, RN, FAAN, currently serves as the (inaugural) Director of the Office of Community Health for the City of Chattanooga. She is also an Associate Professor at Vanderbilt University, School of Nursing. She worked with the HHS Assistant Secretary for Health as well as assignments with the FDA and with CDC and at the White House. Dr. Lambert retired from active-duty service with the U.S. Army and the U.S. Public Health Service Commissioned Corps.

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Yen Murray, MBA, is Business Coordinator in the Division of Information Technology at Texas A&M University-Corpus Christi. She originally served in the College of Nursing and Health Sciences as an academic administrative assistant and clinical coordinator where she interchanged with hospitals throughout Texas for nursing students' clinical placements. She enjoys working for the University and is proud to be an Islander.

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Susan Rachlin, MD, FACR, is Executive Associate Dean for Student Affairs and Associate Professor of Radiology at New York Medical College in Valhalla, NY. She has a distinguished record of teaching and has been awarded the Excellence in Teaching and Mentorship yearly at graduation. Dr. Rachlin is a member of the Gold Humanism Honor Society and won the prestigious Leonard Tow Humanism award for recognition of her humanistic, compassionate approach to medicine and teaching.

Janis M. Riccardelli, AIHM, BA, in addition to being a Deacon with the AIHM religious community, works for CNA Insurance as an Underwriting Technician for the National Accounts Property division out of their Philadelphia Branch. When not at CNA, she enjoys living with her son and is an avid home supporter of domestic animal life, including for their German Shepherd dog, three ferrets, two geckos, one turtle, fish, and numerous chickens and geese.

Akili N. Smith-Washington, BS, currently is a Doctor of Medicine student in the McGovern Medical School at University of Texas Health Houston. Her undergraduate degree is in chemical engineering from Tuskegee University. She has participated in numerous undergraduate and graduate research projects. She was a co-author of a recent publication, *Knowledge Gaps In Surgical Management For Aortic Dissection* (Case et al., 2022).

Chastity Sutterfield, BSN, RN, holds a Bachelor of Science degree in Nursing from Lee University. She serves as a Registered Nurse Navigator with the Office of Community Health in Chattanooga, TN. Prior to this position, she worked as a Nurse Specialist at the Hamilton County Health Department in the area of epidemiology. Her professional experience also includes implementing evidence-based practices in medical settings, working in multicultural environments, and providing holistic care within various populations.

Michael A. Washington, PhD, has a doctorate in Interdisciplinary Studies, concentration Ethical and Creative Leadership, from Union Institute and University. His academic background demonstrates interdisciplinarity with undergraduate degrees in chemistry and chemical engineering and a master's in history and culture. He has held several senior corporate leadership roles, community leadership roles, and entrepreneurial experience. A scholar practitioner, his expertise and professional experiences in business and social justice advocacy inform his scholarship, theory development and praxis.

Joshua C. Watson, PhD, LPC, NCC, is Professor and Chair of the Department of Counseling and Educational Psychology at Texas A&M University-Corpus Christi. Dr. Watson has over 22 years of clinical experience working in a variety of community mental health and private practice settings and leadership in various professional organizations. He is a Fellow of the American Counseling Association with an extensive publication record that includes research into the efficacy of integrated behavioral healthcare.

Ty Young is an undergraduate student in the school of Grady College of Journalism and Mass Communications at the University of Georgia in Athens, Georgia. He is an Entertainment and Media Studies major with a certificate in Interdisciplinary Writing. During his time at Georgia, Mr. Young has been named on the Dean's List and as Presidential Scholar for multiple semesters. He also works with the college newspaper, *The Red & Black.*

PRELUDE

The Soul-Journey Before Us All

Dr. Edward Gabriele
Editor-in-Chief and Executive Director,
Journal of Health and Human Experience
President and Chief Executive Officer,
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Email: egabriele@mac.com

> *"I have a dream that one day every valley shall be exalted, and every hill and mountain shall be made low, the rough places will be made plain and the crooked places will be made straight and the glory of the Lord shall be revealed and all flesh shall see it together. This is our hope."*
>
> — Martin Luther King, Jr.
> "I Have A Dream"
> The March on Washington
> August 28, 1963

Dreaming...

We all dream...

Whether it be the stories that enter our minds while we are asleep, or the vastly diverse images that highlight and move us in mind and heart during each day, our lives are filled with dreams. In fact, scholars and professional experts move us to understand that dreaming is intrinsic to the entire human experience --- whether it be our individual experiences or the experiences of family, community, society, and human culture. As we know, what constitutes dreams is vast and diverse. It is certainly a moment, whether asleep or awake, when we or our world come to wonder about who and what we are. It is also a moment when the possibilities of life can arise.

At the same time, the dream can force us to face the real failures that are also part of the human experience whether ours individually or society's in general. Naturally, some of these failures are true nightmares that raise up the horrors of evil that can and do invade and infect our world. Indeed, all of these are part of our experiences both as individuals and members of our various communities and societies. As we mature and develop, we come to know that dreams are more than just stories or blank images. In fact, especially as we often learn in literature and the arts, dreams are actually powerful doorways to understanding. Most deeply, they are true metaphors through which we enter into the very nature of the human experience --- realizing what is possible in what lies before us.

Ultimately, all of us live our lives as people on a journey --- a pathway not only of what lies before us in the events of our lives, but even more deeply what lies within our very selves. Our common journey as human beings is the pathway into the very meaning of who we are, both as individuals and as socio-communal citizens. The journey ultimately leads us to discover continually and with increasing depth who we are, what is the very meaning of our lives and what is the meaning of life itself. In other words, the pathway we all take in this life is our soul-journey. And the dreams we experience, including the nightmares, help us to continue on this incredible soul-journey that is the pathway for developing into who we are called to be and all that we called to do for ourselves, for others, for The True, and for The Good.

This year, we remember Dr. King's powerful words about dreaming. This year marks the 60th dual anniversaries of his "I Have a Dream" speech and his August 28, 1963 March on Washington during which the speech was given --- an incredible dual moment in the history of social justice and human rights in America. These dual anniversaries are also deepened by this year's 160th anniversary of the implementation of the Emancipation Proclamation that struck an important blow for the eventual full ending of slavery. These anniversaries are raised up with honored remembrance in a most special way in this edition of the Journal. The remembrance of Dr. King's Dream and the March on Washington is powerfully important and significant for us all today. In his time, Dr. King raised up the nightmare of racism and segregation. And today as we travel the pathway of our own soul-journey, our lives have been suffering under nightmarish realities that stir up our awareness of the fears within us all.

For the past several years, we have been suffering from COVID-19. We have lost untold numbers of our sisters and brothers to the horrors of this pandemic. And this same disease has made us all painfully aware of the disturbing ambivalence some have expressed toward the expert guidance and direction from our health leaders. We also have been suffering from a wide range of other various horrifying pandemics. We have been seeing the nightmare of war and violence especially as it continues in the Ukraine. Syria and Turkey have suffered the deaths and woundedness of thousands upon thousands due to the earthquakes there. Gun violence and murders have been robbing us of and decimating the lives of so many including in our schools. And all across our world we are seeing the pathways of our human lives being infected and invaded by a most shocking resurgence of hatreds and discriminations as we have suffered from so many times in history. These include all forms of anti-human prejudice, violence and brutality against vastly diverse individuals and communities such as but not limited to: Women, Blacks, Latinx, Native Americans, Asians, Jews, Muslims, Hindus, LGBTQIA+ women and men of all ages, senior citizens, the poor, the homeless, the diversely-abled, those suffering from diseases whether emotional or mental or physical, and so many more.

Indeed, these are all pandemics. Pandemics. An interesting word. Its origin is in the Greek *pandemos*, meaning "everybody." The nightmares of our times have truly been pandemics. Certainly, they affect the millions who suffer directly at the hands of these horrors. And they affect us all --- everybody --- every single one of us --- whether we are those directly brutalized or those who learn of these horrors. We suffer from what we may experience ourselves, and also by what invades our consciousness both as individuals and as families, communities, societies and cultures. One way or another, all of these pandemics make an impact on our lives. In fact, such awareness becomes the first step in what is our common calling to do all we can to end the nightmares and bring the healing that is needed.

Truly, the pandemic nightmares of hate continue to pervert the pathways of our lives. Today more than ever Dr. King's Dream and The March to raise up social justice and human rights must continue. And it is for us, for everybody, to lead the way on the soul-journey pathway now and forever!

Within all this, the dream-metaphor prompts us with deep and important questions. Is there any way that within ourselves we do not do enough to stop these nightmares from becoming reality? Is there any way in which they mar our own soul-journeys without our fully realizing it? By ambivalence, do we let the nightmares continue? This could happen to any of us. And so the soul-journey's dreams call us to look within ourselves and see where we need to change who we are and all we stand for so that we contribute in the most powerful way to making The Dream come true. This indeed was Dr. King's hope. And it must be ours to bring into reality.

Are we ready to take the soul-journey within to see who and what we really are?

Are we ready for the pathway within and beyond ourselves?

Are we prepared to stand up and march for The True and The Good so that Dr. King's Dream always comes into reality in every moment and every place of human existence?

Do we see the soul-journey before us? The pathways opening up?

Are we ready for The March?

Are we ready to end the nightmares and make The Dream come true?

Special Notation

The photograph used at the beginning of this Prelude is that of Sunset in Israel. It is in the public domain per Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Sunsetinisrael.jpg. The photograph at the conclusion is of Dr. King at the Lincoln Memorial on the March on Washington. It is also in the public domain per Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Martin_Luther_King_Jr._addresses_a_crowd_from_the_steps_of_the_Lincoln_Memorial,_USMC-09611.jpg

ARTICLES & COMMENTARIES

The Japanese American Incarceration and Its Continuing Effects

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This article is based on the authors' research into the Japanese American incarceration and the first author's experience as a member of the Sansei generation of Japanese Americans whose parents met as childhood incarcerees at the camp at Heart Mountain, Wyoming. The authors have no conflicts of interest.

Abstract

In the 80 years since President Franklin Roosevelt authorized the incarceration of 120,000 Japanese Americans because of unfounded fears of potential espionage and sabotage, the act has become known as one of the most egregious human rights abuses in U.S. history. Yet multiple myths about the incarceration remain, primarily that the incarcerees rebounded with little effect and that they went into the concentration camps with little resistance. In fact, the incarcerees resisted on multiple occasions, often with dreadful effects on the community, and they were left with long-lasting mental health trauma that has affected later generations that never experienced the incarceration personally.

Keywords: Incarceration, racism, multigenerational trauma, disobedience, resistance, Model Minority

Introduction

Of the many myths that still surround the incarceration of 120,000 Japanese Americans solely because of their ethnic origin and appearance, perhaps the most pernicious are that they went without complaint and then rebounded after the war because they were somehow a Model Minority.

Neither myth was ever true. Thousands protested, either by declining to sign a flawed loyalty oath, by resisting the military draft or by dozens of acts of civil disobedience behind the barbed wire. Thousands more, including the generations of descendants of the original incarcerees, suffered through multigenerational mental health trauma and the loss of community.

These myths were created and perpetuated by the people and institutions, inside and outside government, that sought to justify their conduct during the war and to minimize its effects.

The wartime incarceration ripped people from their homes and livelihoods, forcing them first into hastily built assembly centers and then isolated concentration camps. Those who left the camps had to move to parts of the country where they knew no one and had to assimilate into white-dominated cultures rife with racism and hatred. Survival depended on submerging personal and cultural identities as the nation fought with the country of their ancestry. That loss of identity still remains.

Many Japanese Americans whose parents and grandparents were incarcerated grew up knowing little while growing up. Their relatives never talked about their imprisonment, how they were forced from their homes and schools, and had to live in tarpaper shacks without running water or indoor plumbing. Instead, younger generations could only guess at the causes of their elders' behavior, such as why grandmother hoarded toilet paper or dad insisted on privacy while in the bathroom. For some families, home became a fortress, while for others, home had little meaning. Why get attached to a building when it could be taken from you so easily?

And for thousands of others, their very appearance caused doubt, fear, or shame. At the very least, it meant uncertainty, but also, as was even more likely, rejection.

This article shows the real costs behind the myths and how ignoring the truth threatens not only the mental health of Japanese Americans but other marginalized groups of Americans who want only to enjoy the benefits of living in a country that bills itself as a beacon of liberty and equality.

Legacy of Racism

Asian immigrants started arriving on the West Coast shortly after the start of the California Gold Rush in 1849. Mostly from China and almost all men, they worked in gold fields and performed the most arduous work. They also encountered immediate racial hostility (PBS, 2006).

Caucasian workers resented the Chinese immigrants who worked harder for less money. Many whites began to lie about the alleged dangers posed by the Chinese, such as how they brought rare diseases to the mainland (Kaur, 2021). Chinese immigrants were routinely attacked and subject to racist abuse.

But without them, the transcontinental railroad that opened up California to the east would never have been finished. Hundreds of Chinese immigrants died blasting the railroad through the Sierra Nevadas (National Park Service, 2022). They were paid for their sacrifice by being eliminated from the official photos taken when the two legs of the railroad met at Promontory Point, Utah, in 1869 (Young, 2014).

Anti-Chinese rhetoric increased until 1882, when Congress passed and President Chester Arthur signed the Chinese Exclusion Act. That law wiped out the source of cheap labor from Asia, which forced businesses hungry for new workers to look toward Japan.

Japanese workers, almost all of them younger sons with little to look forward to in Japan, began immigrating to Hawaii to work in the pineapple and sugar fields. From there, many sailed to the U.S. mainland, where they worked on farms, in mines, and on the railroads.

The Higuchi and Saito families were among the 125,000 Japanese who made the journey from Japan to the United States or Hawaii--until 1898 an independent nation--between 1868 and 1924. They left Japan because of the economic and social upheavals of the Meiji Dynasty and came to the United States in search of riches and work, often after reading glowing reports in books like *How to Succeed in America* (Yoshida, 1909). Unlike European immigrants, they were of a different race, spoke an unfamiliar language with an unrecognizable alphabet, and practiced a religion--Buddhism--that clearly marked them as “the other.” White Americans, many of them recent immigrants themselves, saw the Japanese as a new type of Yellow Peril following the Chinese.

The racist cycle then repeated itself. Fears over Japanese immigration accelerated after Japan’s victory over Russia in their war in 1905. A *San Francisco Chronicle* editorial in 1905 called the Japanese “the worst immigrant we have,” citing no reason but clearly indicating the root cause was pure racism (San Francisco Chronicle, 1905). Whites created anti-Japanese leagues to discourage immigration and sought to deny the newcomers the rights of citizenship and land ownership. “I am opposed to the Japanese immigration, just as I am opposed to the coming in of any race that injures our working man,” a local businessman said in March 1905 (San Francisco Chronicle, 1905).

States passed laws banning the sale of land to Japanese immigrants, which forced many to put the ownership of the family farm in the hands of their minor children. White-dominated farming groups accused Japanese farmers of cheating the system as the Japanese generated higher profits from their farms than the Caucasians (Commission on Wartime Relocation and Internment of Civilians, 1983). As early as 1907, the all-white Native Sons of the Golden West organization was calling for the exclusion of all “orientals” from California (Robinson, 2015).

Immigrant Experience

By the time Iyekichi Higuchi prepared to leave the country of his birth in 1915, California had already passed its Alien Land Law. But he came to the United States anyway. He knew, however, that he would have to leave his home in Saga on the southern island of Kyushu, because times were hard and opportunities limited for all but a family’s first-born son. When they landed in California, Iyekichi and Chiye Higuchi joined the tens of thousands of other Issei, first-generation Japanese immigrants, trying to coax a living out of the state’s rich soil (Higuchi, 1990).

They, like thousands of other Japanese immigrants, gravitated to Santa Clara County, a lush agricultural region south of San Francisco. What the world now knows as Silicon Valley was then marked by small vegetable farms and orchards.

The Higuchis and other immigrants, known as Issei, and their children, the second generation, or Nisei, began to thrive. However, banks still refused to lend money to Japanese businesses, and Issei and Nisei alike still needed help navigating a legal and political system rigged against them. They created dozens of organizations to help them cope, and by 1929 the Japanese American Citizens League (JACL) was created by merging three groups. The JACL aimed to protect the citizenship rights of Japanese Americans, and its leader was Saburo Kido, a San Francisco lawyer and Hawaii-born Nisei (Daniels, 1962). However, the organization that started as a vehicle to advocate for the rights of Japanese Americans would take a less charitable turn after the start of the war.

Pressure on Japanese immigrants accelerated after World War I, as it did for all immigrants from countries other than Northern Europe. The Ku Klux Klan reemerged from the shadows of American political life and the false science of eugenics gained respectability among elected officials and intellectual leaders (Yang, 2020).

Nothing showed the racist underpinnings of American immigration law than the case of Takao Ozawa, who first immigrated to California to attend the University of California in 1894. In 1914, then a resident Hawaii, a U.S. territory, he filed for citizenship under the Naturalization Act of 1906 (Yang, 2020). That law allowed “free white persons” and "persons of African nativity or persons of African descent" to become naturalized citizens (Yang, 2020).

Ozawa argued that his skin was as white as any Caucasian, but a series of courts ruled that, as a Japanese immigrant, he was not a white person and was therefore ineligible for citizenship. In 1922, a unanimous U.S. Supreme Court agreed.

The ruling in Ozawa v. United States was used as evidence to justify the banning of immigration rights to Asians in the ruinous 1924 Johnson-Reed Act, which eliminated the right of any Asians to immigrate to the United States and established restrictive quotas for immigrants from any county other than those in Northern Europe. Based on eugenics and the erroneous theory that Asian immigrants could not assimilate into American society, this law-controlled U.S. immigration policy for almost 30 years (Imai, 2013).

Lack of Understanding

This was the atmosphere in 1940, when the start of the war in Europe and Japan’s alliance with Germany and Italy raised concerns about the Japanese community in the United States.

Although second-generation Japanese Americans had assimilated widely into American culture, the U.S. government as a whole knew little about the community, and government leaders were willing to believe the worst. Already, the FBI under J. Edgar Hoover was relying on a network of informants and agents to monitor the community, keeping a bank of index cards with information on community leaders (Gage, 2022).

It seems inconceivable now that the president of a budding superpower would officially sanction, as President Franklin Roosevelt did, having a syndicated newspaper columnist take on an official role as an intelligence officer. John Franklin Carter was a forty-three-year-old author of thrillers and a column called "We, the People," which he wrote under the name Jay Franklin, when he enthusiastically supported Roosevelt's unprecedented run for a third term in 1940. After Roosevelt's victory, Carter was repaid for his support by being made an unofficial intelligence clearing house with about a dozen agents funded by the State Department. Carter's eclectic assortment of operatives carried out assignments in the Caribbean and South Africa (Higuchi, 2020).

In the summer of 1941, Roosevelt asked Carter to study the Japanese community on the West Coast. Carter assigned the job to an unlikely agent--Curtis Munson, a Republican industrialist from Detroit. No expert in Asian affairs or anthropology, Munson had a gift for gathering information and reporting it back clearly and colorfully. On the West Coast, Munson visited with Saburo Kido of the JACL, other community leaders, and Naval Intelligence Lt. Cmdr. Kenneth Ringle, who told Munson the local community was not dangerous. Munson also detected the Nisei's strong desire to prove their patriotism and the Issei's general lack of pro-Japanese sympathies. Munson (1941) did note that "there are still Japanese in the United States who will tie dynamite around their waist and make a bomb out of themselves," but the overall tone of his report was that the Japanese community in the United States did not pose a threat. When Carter passed the report to Roosevelt, he highlighted in a one-page cover sheet the sensational finding about dynamite. It is not clear whether Roosevelt read much more, particularly the part of the report that spelled out that "there is no Japanese 'problem' on the coast. There will be no armed uprising of Japanese." Neither Munson nor Carter knew of Roosevelt's long-held suspicion of the Japanese, evidenced by a 1936 memo to the Chief of Naval Operations in which he recommended the establishment of concentration camps for Japanese Americans in Hawaii who were suspected of collaborating with the Japanese (Irons, 1983).

Munson himself saw a Japanese community intensely loyal to the United States, one that was motivated to prove itself despite decades of suspicion and ostracism. Japanese Americans, Munson reported, knew that they were "in a spot" between their love for their new home and their ethnic origin. Munson (1941) observed that the Issei "...have made this their home. They have brought up their children here, their wealth accumulated by hard labor is here, and many would have become American citizens had they been allowed to do so. They are for the most part simple people" (Munson, 1941). The overwhelming majority of Japanese Americans just wanted to work, provide for their families, and be treated as Americans, he noted.

Most Japanese Americans had no inkling of how much of a spot they were in. The FBI was already compiling lists of suspect members of the community, starting with Buddhist priests, Japanese-language teachers, and leaders of various social organizations. Munson did single out one group of Japanese Americans--US-born Nisei who had been sent by their parents to Japan for school. These students were known as the Kibei, and Munson said they were "considered the most dangerous element and closer to the Issei with especial reference to those who received their early education in Japan." His opinion foreshadowed the tougher treatment of the Kibei during wartime, as they fell under suspicion as potential saboteurs. Munson noted, however, that insular Japanese society often rejected the Kibei as tainted by foreign influence. "In fact, it is a saying that all a Nisei needs is a trip to Japan to make a loyal American out of him" (Munson, 1941). This was the best intelligence Roosevelt had at his disposal on December 7, 1941.

Pearl Harbor and Fear

Higuchi's maternal grandfather, Yoshio Saito, was working in his Oakland store, the Golden Pagoda, on December 7, 1941, when he heard about the attack on Pearl Harbor. He called his wife at home, and Fumi Saito knew that any man with a Japanese face was at risk of being attacked by an angry mob. She grabbed her children, Setsuko, who was ten, and her two brothers, twelve-year-old Al and eight-year-old Hiroshi, and headed for Oakland. She knew that escorting her husband with three children would protect him, because she believed vigilantes would not hurt a family with small children. "When we finally got over to Oakland," Al Saito remembered 70 years later, "my mother had a brisk, a very brisk walk and she told us not to look left or right, just walk straight ahead and follow quickly." They found Yoshio and escorted him home without incident (Saito, 2009).

Fears of violence against Japanese citizens were confirmed almost immediately by actions taken of FBI agents, who had long tracked suspected Japanese American saboteurs or spies. They swooped in to detain community leaders, such as Buddhist priests, members of pro-Japan groups, and men such as Clarence Uno, the secretary of the San Gabriel Valley Japanese Association, who spent most of his days helping local farmers translate documents and navigate the US bureaucracy (Higuchi, 2020). The FBI, which had already detained Clarence's older brother, George, soon descended on Clarence's home, witnessed by ten-year-old Raymond, who saw the bulge of a gun in one agent's pocket (Higuchi, 2020). The agents took sixteen receipt books from the San Gabriel Valley Japanese Association, lists of Japanese American organizations, a copy of *Ten Proverbs for a Good Life*, a pamphlet for a Showa Japanese textbook, and two copies of the family census (United States War Relocation Authority, 1943). Clarence Uno remained free, however, while other Japanese Americans, such as his brother, would spend years in FBI detention centers without trial. The main criterion for FBI detention was a person's status in the community, so Buddhist priests, teachers, community group leaders, and others were taken away, which effectively decapitated the Japanese American population when it needed its elders the most.

The next day, a Monday, Roosevelt entered the chamber of the House of Representatives to address a joint session of Congress, where he said the United States was at war with Japan.

Fear surged through the Japanese American community during the weeks between the attack and the executive order. In Southern California, Bacon Sakatani's mother put away anything Japanese and placed a picture of Abraham Lincoln on the mantel (Sakatani, 2010). Inside the Higuchi farmhouse in San Jose, Chiye Higuchi stuffed large newsprint photographs of Emperor Hirohito in the wood-burning stove, along with anything else that indicated loyalty to Japan. She wanted FBI agents who came knocking on her family's door to see an all-American home. Iyekichi Higuchi had already noticed signs of vandalism around their fourteen-and-a-quarter acre raspberry farm, and a family owning neighboring land had already asked whether the Higuchis wanted to sell their farm. Around San Jose, other Japanese farmers felt the same pressure (Higuchi, 1990). His wife Chiye was right to worry. No person of Japanese descent living on the West Coast could count on the white politicians to save them.

Assembly Centers and Camp

Officials inside the Roosevelt administration resisted the demands to force Japanese Americans into concentration camps or even deport them entirely. FBI Director J. Edgar Hoover believed his raids on community leaders had rendered the forced removal from the community superfluous. Hoover considered a wide-scale incarceration unnecessary and an attack on his agency's effectiveness. Hoover found an ally in Attorney General Francis Biddle, who also considered an incarceration a blight on civil liberties. But they were overruled by military leaders, such as Gen. John DeWitt of the Western Defense Command, who believed that the "Japanese race is an alien race" incapable of assimilation (Gage, 2022). On February 19, 1942, Roosevelt signed Executive Order 9066, which authorized the military to remove those it considered a security risk. Japanese Americans were not singled out by the order, but they did not have to be. Everyone in Washington and on the West Coast knew who was targeted by the new order.

Evacuation orders were shaped by Census Department records that identified Japanese Americans living on the West Coast. At the time, the census listed residents by their country of origin. The Higuchi family's 1940 Census listing details where Iyekichi and Chiye lived in San Jose, along with their nation of origin--Japan--just as it also listed the Italian origins of their neighbors. The census also showed that three of the Higuchi children--Kiyoshi, William, and Emily--lived at home with them (Bureau of the Census, 1940). Using census records enabled the military to identify quickly how many Japanese Americans lived in each town. A February 7, 1942, *New York Times* article reported, "The census data . . . would be of material aid in mopping up those who eluded the general evacuations orders" (Trussell, 1942). Though the federal government had promised as recently as 1940 that census information would not be used to pry into the personal lives of Americans, Congress passed the Second War Powers Act in March 1942, specifically giving the government the power to use census information to help round up Japanese Americans. While previous census directors had blocked law enforcement accessing their data, the new leadership had no objections. Census officials backed the new law and turned over the data to the military.

Tom Clark, a future Supreme Court justice who was then the Justice Department's civilian coordinator of the Enemy Alien Control Program on the West Coast, said he worked with DeWitt's team on the evacuation plans with census officials.

> We took over this hotel and put these people in there and the census people began to ask where the citizens of Japanese descent lived," Clark said. "Fortunately, the census had only been taken the year before, 1940, and so they brought their own files out there. We got some big sample tables like salesmen use and they put the raw reports out on the table. Inside of, oh, sixty days they could tell us exactly the city blocks where the people of Japanese descent lived. It was amazing, their office figures from the 1940 census was within half of 1 percent of the actual figures (Clark, 1972, 1973).

Despite admissions like Clark's to historians, the Census Department and its leaders lied about these actions for decades, until academic researchers proved otherwise in 2000 and forced a formal apology from the Census Bureau (Aratani, 2018).

Once the orders to leave were issued, Japanese Americans had a week to get their affairs in order. Many, such as the Higuchis, sold their homes and businesses for pennies on the dollar. They were then sent to assembly centers, a series of horse tracks and fairgrounds turned into prison camps.

Families from San Jose, such as the Higuchis, arrived at the huge racetrack at Santa Anita in Arcadia, California, about twenty miles from downtown Los Angeles. Many families from Los

Angeles went to Pomona, about twenty miles from Santa Anita and forty miles from downtown Los Angeles. The Saito family was an anomaly. As San Franciscans, they should have gone to the assembly center at the Tanforan racetrack south of the city and then to the camp at Topaz, Utah. But Tanforan was too crowded, and they were diverted to Pomona.

They arrived to conditions that few could have imagined. The earliest arrivals at each center were stuffed into quarters that had only days earlier held the horses that raced at the tracks. Decades later the stench of the horse stalls remained stuck in their nostrils.

The families that arrived later received quarters in hastily built barracks located in the parking lots at each center. These were far preferable to the stalls reeking of manure and urine. However, the construction crews used green wood that shrank as it matured, leaving gaps between the planks that allowed people to see into the barracks from the outside. The barracks had only one light bulb, “no screens on the window, open ceilings where you could hear the noise of your neighbors, and in fact they had those boards that you could see through to your neighbor,” said Bacon Sakatani (Sakatani, 2010).

For the Higuchi family, the Santa Anita camp was so vast and so confusing they immediately faced a crisis soon after their arrival. Five-year-old Emily Higuchi went to the latrines shortly after the family arrived. Having grown up on an isolated fourteen-and-a-quarter-acre farm in San Jose, Emily had never seen so many Japanese. When she walked out of the latrine, she did not see her brother Kiyoshi and started walking to the family’s barracks alone. But the rows of barracks all looked the same, and so did the thousands of Japanese American faces. Overwhelmed and confused, Emily got lost. “My mother was in really bad shape,” William Higuchi remembered. “She was scared to death of what could happen. She was going crazy.” When Bill finally spotted Emily and ran toward her, she ran away, unable to recognize him amid the crowd. It was an inauspicious start to their time at Santa Anita (Higuchi, 2018).

Fumi Saito faced her own scare not long after arriving at Pomona. Around 5 p.m. on July 3, she began vomiting, having trouble breathing, and feeling numbness in her hands and feet. She was rushed to the center’s hospital, where the doctor, Wilfred Hanaoka, a thirty-four-year-old Nisei from Hawaii, diagnosed her with a serious reaction to the medicine she had taken earlier. “This patient,” Hanaoka wrote in Fumi’s chart, “was perfectly well until tonight at 5:10 p.m. She had some headache so she took some white pills which were prescribed for her in San Francisco,” her home until six weeks earlier. “She also became extremely nauseated, began to vomit. She also became very dyspeptic and also became deaf in both ears” (Hanaoka, 1942). Yoshio, her husband, told Hanaoka that Fumi’s face had turned blue, and the doctor noted that she was sweating profusely.

This was one of the thousands of traumatic experiences faced by children during the incarceration. Away from home, confined to a hastily built shack in the infield of a fairgrounds, Setsuko Saito had to watch the mother she loved so dearly wracked by vomiting and numbness. This moment, amid the stench of manure and sweat at Pomona, is when the posttraumatic stress that may have affected Setsuko Saito Higuchi later in her life got its start. The helpless feeling that Setsuko felt, knowing that she could not help her own mother, was most likely the impetus for her need to control everything around her and for her hypervigilance.

The terrifying episode at Pomona when her mother had fallen ill, writhing in pain on the barracks floor, led Setsuko to stay close to her mother's side as they left the fairgrounds for the train trip. She mostly kept a watchful eye on her mother as they rode in the darkness, afraid that something bad would happen to her. Setsuko grew up living with fear that started the moment she and her family left San Francisco for Pomona and then Heart Mountain.

Meanwhile, the first signs of resistance emerged in the assembly centers. Incarcerees incensed by the conditions and their treatment at Santa Anita rioted on Aug. 4, 1942. The riot "was sparked on August 4th by a surprise inspection of all barracks, and by rumors that in addition to the removal of hotplates, dishes, books, and record albums, internal security were also taking money and jewelry. In response, some Nisei attacked a number of Internal Security Police and threatened others" (Lyon, 2015).

Enablers

Forces inside the Japanese American community made it easier for the government to incarcerate 120,000 people. After the Issei leaders were rounded up in the hours and days after Pearl Harbor, they were replaced in the government's eyes by members of the Japanese American Citizens League.

The JACL was a Nisei-led organization and emphasized shedding old world values for those of their new country. JACL leaders, such as Mike Masaoka of Utah, had no real legitimacy among the community as a whole, but the government either did not realize that or did not care. It granted the JACL and Masaoka the legitimacy they wanted.

Shortly after the forced removal started, a House committee led by Rep. John Tolan, a California Democrat, conducted hearings on the alleged security threats posed by the Japanese American community. Tolan anointed Masaoka as a leader of the Japanese American community, although the JACL represented only a fraction of those subject to forced removal. The group's leadership believed it was inevitable that the government would force Japanese Americans to move, so resistance would be futile, and since most of the community's longtime leaders had already been arrested and imprisoned, the JACL was the only organization left to provide some veneer of credibility for claims that Japanese Americans had been allowed to testify. Masaoka told the committee and federal authorities what they wanted to hear. He willingly traded away the rights of Japanese Americans in the name of shared sacrifice, which he, as a resident of Salt Lake City, Utah, did not have to make. He lived outside the exclusion zone.

Masaoka was desperate to separate the JACL and himself from those of Japanese descent who could be considered suspicious. "Just to show you how Americanized we are I have an English name," Masaoka said, before entering into the record his support of an evacuation based on national security needs, even if it targeted Japanese Americans. When asked if Japanese Americans would cooperate with being removed from their homes, "Oh, yes; definitely," he said. "I think that all of us are called upon to make sacrifices. I think that we will be called upon to make greater sacrifices than any others. But I think sincerely, if the military say, 'Move out,' we will be glad to move, because we recognize that even behind evacuation there is not just national security but also a thought as to our own welfare and security because we may be subject to mob violence and otherwise if we are permitted to remain" (Tolan Committee, 1942).

At Heart Mountain, the *Sentinel*, the camp newspaper, was edited by another JACL member Bill Hosokawa, who had helped run Camp Harmony, the assembly center for Japanese Americans ousted from their homes in the Seattle area. Hosokawa had testified against two community leaders in a loyalty trial before he was sent to Heart Mountain (United States War Relocation Authority, 1943). Throughout the war, the *Sentinel* hewed closely to the JACL line, and after the war, Hosokawa would write several books that would perpetuate the JACL version of the incarceration. One, *Nisei: The Quiet Americans*, would firmly establish the myth that the Japanese American community accepted its incarceration willingly.

A New Home

After spending four days and nights riding in darkened train cars from the assembly centers, the incarcerees bound for Heart Mountain arrived at their new home. With almost 11,000 residents, it was immediately the third-largest city in Wyoming, a reality that alarmed the residents of nearby Cody and Powell.

Stretching over one square mile of land in the shadow of the mountain named by the Native American Crow Nation that had once lived there, Heart Mountain featured row after row of hastily built barracks without running water or indoor plumbing. The tar paper covering the planks did little to keep out the wind and the dust that swirled across the plain. Heart Mountain was a camp--a dusty, wind-whipped prison that filled its residents with despair. They wondered when or if they would leave. “We got off that train and looked up there at the camp that was to be our home for the next--I don’t know how many months--and most of the people who got off the train shed tears like you’ve never seen before,” said Amy Uno Ishii, who was twenty-two when she and her husband arrived at Heart Mountain (Ishii, 1973).

The Higuchi family arrived at Heart Mountain from Santa Anita on September 14. “We got to Heart Mountain in the late afternoon,” William Higuchi said. “We got off the train and our family was on a truck going to our barracks. We started out on block 6. That day my father fell ill.” The family thought Iyekichi had suffered a heart attack. “He was lying on the floor of the barracks for a while,” William said. “The ambulance came and took him to the hospital. That started our first day at camp.” Iyekichi, however, had only acute gastroenteritis, not a heart attack (Higuchi, 2018). Even though Setsuko Saito and William Higuchi did not know each other at the time, they were almost simultaneously experiencing their parents’ distress at their new conditions; Setsuko had watched her mother collapse, while William witnessed the physical effects of the incarceration on his father.

Resistance and Harassment

Once inside camp, the incarcerees struggled to build a community. They scrounged building materials to add insulation to their barrack walls and find some level of privacy. But they were forced to eat substandard food and faced a steady stream of propaganda from the Sentinel to follow the government line. The War Relocation Authority, run by longtime Agriculture Department official Dillon Myer, wanted to use the incarceration to “scatter” Japanese Americans from their West Coast enclaves to cities around the country to force their assimilation (Higuchi, 2020).

Meanwhile, the military realized it had a pool of eager Japanese Americans, particularly from Hawaii, who wanted to fight for the country that was imprisoning members of its community. They created a campaign at the beginning of 1943 to encourage voluntary enlistment in the Army, the only service in which they would be allowed to serve.

To facilitate enlistment and relocation, the military and the WRA created a loyalty questionnaire to determine which incarcerees were safe to allow to serve or move outside the camps. But the questionnaire was written without understanding the cultural dynamics inside the Japanese American community. Two questions in particular, numbers 27 and 28, created the most difficulty.

Question 27 asked, "Are you willing to serve in the armed forces of the United States on combat duty, wherever ordered?" To men imprisoned without trial by the United States, such a request seemed more than unreasonable. Many answered no. At Heart Mountain, 18-year-old Takashi Hoshizaki answered, "Qualified no. When my citizenship rights are restored and land-owning rights must be cleared." Question 28 asked, "Will you swear unqualified allegiance to the United States of America and faithfully defend the United States from any or all attack by foreign or domestic forces, and forswear any form of allegiance or obedience to the Japanese emperor or any foreign government, power, or organization?" To that, Takashi answered "yes." So did many young Nisei men. But for Issei men who were denied the ability to become citizens by U.S. law, the question was especially difficult. Many feared that answering yes would render them stateless. Forbidden by law from becoming U.S. citizens, they would also be writing off a chance to return to their former country (Higuchi, 2020).

Whatever the War Department and Myer thought the questionnaire would help them accomplish, "It became rapidly apparent that the government had not thought through the implications of the loyalty review program," said the Commission on Wartime Relocation and Internment of Civilians in its 1983 report, *Personal Justice Denied*. "Not only was the program forced on the evacuees with no notice and with few answers to important questions, but the documents themselves were flawed." Answering no to either question 27 and 28 meant drawing the immediate scrutiny of military and WRA authorities with the possibility of detainment at another facility, perhaps one of those run by the FBI. Many of those who answered no to one or both questions did so out of confusion or resentment toward the government. "The temptation to declare a 'no' 'no' position [to Questions 27 and 28] just to maintain the dependent lifestyle in the camps was very strong indeed," former Heart Mountain incarceree Carnegie Ouye said in 1981. "In such cases the issue is survival not loyalty" (Commission on Wartime Relocation and Internment of Civilians, 1983). At the time when the questionnaire was released, young Nisei men were generally classified for the draft as 4C, the category for "enemy aliens." Many could not understand why the Army would want them to serve if it considered them the enemy. If they knew their rights would be returned to them, many gladly would have entered the Army to fight for their country. But they did not believe they had a country to fight for. Many young men answered yes to both questions because they believed their enemy alien status meant they would not have to serve in the Army. Others, however, believed a yes answer could be interpreted as volunteering, to which they objected, because they did not want to volunteer while imprisoned or while their aging parents had no one else to help them. They feared that if they answered yes, they would be drafted and their aging, non-English-speaking parents would be left alone to fend for themselves.

As incarcerees throughout the camp struggled to determine the correct answers to the questionnaire, many young men of military age declined to enlist. The reluctance to serve was particularly acute in Heart Mountain (Nelson, 1976).

The failed enlistment campaign aimed at the Nisei and the turmoil over the questionnaires spurred outrage from the predictable quarters of Congress. The Military Affairs Committee chaired by Senator Albert "Happy" Chandler of Kentucky somehow concluded that as many as twenty thousand prisoners were loyal to Japan, not the United States, and that the camps were a failed experiment that needed to be turned over to the Army, which presumably would impose harsher discipline on the prisoners. Dillon Myer and other top WRA leaders, Chandler claimed, were "God-fearing, honest, well-meaning American citizens, but they are theorists, they are professors, they are making a social experiment of this thing." Myer appealed to Eleanor Roosevelt, and the First Lady set up a meeting between Myer and the president, who agreed to talk to other senators to persuade Chandler to accept a plan to segregate all suspected "troublemakers" into a separate camp, which would be the one located at Tule Lake in northern California near the Oregon border (Higuchi, 2020).

Myer reluctantly agreed, and once again found an ally in Mike Masaoka and the JACL. Masaoka pointed to the Kibei, the US-born Japanese Americans who had been sent for schooling in Japan before they returned to the United States, as particular targets for segregation. But Myer and most WRA leaders also believed that singling out the Kibei for segregation solely because they had lived in Japan was a blanket accusation of guilt without any real evidence. They successfully argued that anyone removed to a segregation camp from Heart Mountain or the other camps had to be removed for just cause, such as answering no to both questions 27 and 28 of the loyalty questionnaire (Reeves, 2015).

The privations of wartime--the rationing of food and gasoline, along with the shortages of staples, such as sugar-—strained the entire country. Those lucky enough to get some hard-to-find item drew envy and suspicion from their neighbors. Even locked away in remote pockets of the West, the Japanese Americans did not escape such suspicion. In January 1943, Senator Robert Reynolds, a North Carolina Democrat and virulent racist, gave a speech on the Senate floor that called for an investigation of the WRA, claiming "...the Japs are getting everything," including fine bathrooms, "and our people aren't getting anything" (Nelson, 1976). That news came as a surprise to the Heart Mountain prisoners, who had to walk through the subzero cold to use the latrines with no privacy.

Around this time, a fired Heart Mountain food service worker gave the *Denver Post* a tip that food was being wasted at Heart Mountain and that the incarcerees were living in relative luxury. He found an ally in Wyoming's newly elected Republican senator, E.V. Robertson, who eagerly fed the *Post* lies, which he later trumpeted when the lies were repeated in the paper.

Although the *Post* stories were eventually debunked, they had done enough damage. Political harassment of the incarcerees continued. Robertson continued to exploit the Japanese American issue until fewer and fewer people paid attention. Wyoming voters responded by ridding themselves of him at their first opportunity in 1948, replacing him by a landslide with the Democratic candidate for senator, Governor Lester Hunt.

Mind Games and Resistance

The segregation program that ripped a thousand people from Heart Mountain and deposited them in Tule Lake "broke apart the community of evacuees by forcing each to make a clear choice--a choice that could be made only by guesswork about a very uncertain future," according to a 1983 federal report. "It divided families and friends philosophically, emotionally and, finally, physically, as some went east to make new lives and others were taken off to the grimmer confinement of Tule Lake" (Commission on Wartime Relocation and Internment of Civilians, 1983).

The segregation experience had scarred the incarcerees at Tule Lake and their children. They carry the anger from their double mistreatment by the government, first their forced evacuation and incarceration and then their placement in the worst of the ten camps. At Tule Lake, which suddenly held all the people considered "malcontents" in what was now the largest of all camps, there was a series of protests and strikes. Unlike the prisoners at the nine other camps, those at Tule Lake were deemed disloyal and condemned to remain behind the barbed wire for the duration of the war. Their one chance to leave would come if they renounced their citizenship and sailed back to Japan. They were treated with increased suspicion by the guards, which led to continued protests and riots and which led only to further isolation. After a strike by agricultural workers, the administration replaced them with "loyal" prisoners, including one hundred from Heart Mountain who were allowed to leave even though they had previously been denied leave clearance. Myer visited in late October and early November, just in time to witness a full-blown riot among the population. As in Santa Anita, where the prisoners rioted, the military police swept through the barracks, threw incarcerees in the stockade, and clamped down on those suspected of sympathizing with Japan.

Resistance inside Heart Mountain started with the Army's 1943 enlistment campaign and the appearance of the loyalty questionnaire. The Heart Mountain Congress of American Citizens, led by Frank Inouye, who had been a senior at the University of California, Los Angeles, when he was forced into the camp, met with a small group of fellow prisoners to protest the questionnaire.

This core group would turn into a bigger problem for the camp administrators, particularly throughout the coming year, when the military began to draft Nisei men in the camps. Three other Nisei leaders in Inouye's group would also play major roles in the opposition--Kiyoshi Okamoto, Paul Nakadate, and Frank Emi. Okamoto was a fifty-five-year-old Nisei from Hawaii, forced into the camp because he lived in California in 1942. His fellow prisoners considered him an eccentric jailhouse lawyer, who talked constantly about constitutional rights and legal theories challenging the incarceration. Sometime in the second half of 1943, he created the Fair Play Committee of One, a solitary crusade against the government that had imprisoned him (Nelson, 1976). Many of the Heart Mountain prisoners considered Okamoto, a bachelor, an eccentric. They could not understand him or his causes or the growing audience he would develop among the younger Nisei men. Regardless, the environment remained ripe for dissent, as the attitudes against enlistment and segregation continued to harden.

At the beginning of 1944, the government reclassified all of the Nisei men in camp as eligible for the draft. Leaders of the Fair Play Committee urged young men facing the draft to refuse to report for induction on the grounds that they were being forced to fight for a country that had forced them into prison camps. Most of the draft resisters said they would willingly fight for the country if they were given their freedom.

Inside the Japanese American community, opposition to the resisters was stoked by the JACL, which had enabled the incarceration and segregation, and allied media, such as the *Heart Mountain Sentinel*. The JACL managed to enlist the help of the American Civil Liberties Union (ACLU), which had previously represented other critics of the forced removal and incarceration. A study of the JACL released in the 1990s indicated that the JACL had asked the ACLU to tell the draft resisters they had few legal options, leaving them to cope with law enforcement on their own (Lim, 1990). The "men who have refused to accept military draft are within their rights," wrote Roger Baldwin, the national director of the ACLU, to Kiyoshi Okamoto, "...but they of course must take the consequences. They doubtless have a strong moral case, but no legal case at all." The letter appeared in one of the JACL's bulletins, strong evidence of the ACLU's collusion with the JACL. It also appeared in the April 15, 1944, edition of the *Sentinel* (Heart Mountain Sentinel, 1944). Baldwin's legal interpretation may have been correct, but from a moral and ethical standpoint the ACLU failed to protect the resisters.

Eventually, 63 men openly resisted the draft and were placed on trial in the state capital of Cheyenne. Encouraged by their defense attorney, they decided to bypass a jury and take their chances with Judge Thomas Blake Kennedy, the sole federal judge in the state of Wyoming. When the case of *United States v. Shigeru Fujii et al.* came into his court on June 12, 1944, the resisters hoped for the best.

The group soon learned their optimism had been misplaced. "The first day, he called us 'You Jap Boys,'" said Takashi Hoshizaki, one of the resisters on trial. "Oh, that S-O-B," Jack Tono, another resister, said to Hoshizaki. "We just don't have a chance with that guy" (Hoshizaki, 2010).

Tono was right. After a six-day trial, Kennedy found all 63 defendants guilty and sentenced them to three years in federal prison. "If they are truly loyal Americans," Kennedy said at sentencing, "they should, at least when they have become recognized as such, embrace the opportunity to discharge the duties of citizens by offering themselves in the cause of our national defense." The resisters received no solace from the *Sentinel*, which dubbed them "slackers." "Had any of the 63 held the interest of all Japanese Americans at heart they would have offered themselves, as have more than 400 other Heart Mountain youths now in the army, and relied upon proper authorities to determine their positions," the *Sentinel* editorialized (Heart Mountain Sentinel, 1944).

The Heart Mountain resisters were all sent to federal prison, which many considered no different than living in camp. They were released in 1946 and pardoned a year later by President Harry Truman. Takashi Hoshizaki, age 97, is a member of the board of directors of the Heart Mountain Wyoming Foundation.

Returning Home

On December 17, 1944, the government declared the exclusion of the Japanese Americans from the West Coast would end at the beginning of the new year. While that meant the incarcerees had the chance to return home, many had no homes to which to return. That created a new wave of stress and uncertainty that further traumatized many of the incarcerees.

One was Iyekichi Higuchi. In May 1945, he was eating in the mess hall when he felt a tightness in his chest and numbness in his arms. He was having a heart attack. The medical staff rushed him to the camp hospital, where his condition stabilized. The Higuchis had to pause and determine what to do once Iyekichi recovered (United States War Relocation Authority, 1945).

By early June, three hundred people were leaving Heart Mountain each week, a pace that no other camp had reached so quickly. Each departing prisoner received a train or bus ticket to his or her final destination and $25 once it had been determined where the person was going. Dillon Myer congratulated camp director Guy Robertson, who said the departures represented "the desires of the progressive and loyal residents of the center. The part played by the administration is simply one of assistance--we are the means to the residents accomplishing their desires" (New Pittsburgh hostel opened, 1945; Project director urges early relocation plans, 1945; Three hostels serving as temporary lodgings for Seattle relocates, 1945).

Fourteen-year-old Setsuko Saito also dreamed of a new home. Her father, Yoshio, was preparing a trip to San Francisco to look for work and a place to live for him, his wife, and their four children, ages two to sixteen. By early August, however, Yoshio Saito still had not found a new home, and he asked the WRA for an extension. Shortly afterward, he found a home in a residential hotel called Yoshimoro's. It would be months before they found a permanent home.

A Divided and Traumatized Community

In the Higuchi home in Washington is a black-and-white photograph of William and Setsuko with their three children taken sometime in 1962. William is wearing a dark jacket with a narrow bow tie, while Setsuko looks like a Japanese American June Cleaver, in a sleeveless dress with a string of pearls. If white faces were placed on the bodies in the photo, they would have looked like any other American family photographed at a studio anywhere in the country. It represents the ideal that Setsuko sought during her life, a constant striving to have their family blend into the white American mainstream. In their home of Ann Arbor, Michigan, however, if there were Japanese Americans, the Higuchis did not know them, and that, it seemed, was fine with Setsuko, who burned with the desire to assimilate into white American society.

Setsuko did not tell her children about the incarceration or what motivated her, but something clearly drove her to put her stamp on everything in their lives. Experts in multigenerational trauma say victims display their trauma in three ways--perfectionism, caretaking, and workaholism, in efforts to obsess, care, and work their way through their problems. That fit Setsuko. Her home was generally perfect, beautiful, expansive with upscale furniture. She meticulously maintained our home's landscaping and cared about its curb appeal. Any messy part of the home remained behind closed doors. She shunned friends or neighbors who did not meet her standards, just as she did not visit or discuss relatives with inconvenient lives. Setsuko hovered over her husband and her children.

Psychologists have developed entire practices studying the effects of the incarceration on Japanese Americans. Therapists such as Amy Iwasaki Mass; Satsuki Ina, who was incarcerated at Tule Lake and the FBI camp at Crystal City, Texas; Donna Nagata, of the University of Michigan; and Nobu Miyoshi have shown the disabling and durable impact of the incarceration on the Sansei, detailing how younger Japanese Americans are crippled by a trauma they did not experience personally. Much of that, Mass wrote, comes from how the Nisei handled their own trauma. “I came to realize that we lulled ourselves into believing the propaganda of the 1940s so we could maintain the comforting image of a benevolent Uncle Sam,” she wrote. “The insult, the pain, the trauma, and the stress of being imprisoned were so overwhelming, we used the psychological defense mechanism of repression, denial, and rationalization to keep from facing the truth” (Mass, 2014).

Many Sansei feel lost, in part because they do not understand the events that shaped their parents and grandparents and that directed their behavior. They do not know why their parents were obsessed with propriety, worked all of the time, or carried an unspoken shame. Miyoshi said, however, that the Sansei could eventually determine their identity needs “through open dialogue between themselves and their Nisei parents. The process by which such a goal is achieved in family therapy sessions requires mutual striving, giving, and trusting” (Miyoshi, 1998).

Sansei children often had to endure years of wondering why their parents acted as they did. Darrell Kunitomi and Kerry Cababa, whose parents, Masa and Jack Kunitomi, were incarcerated at Heart Mountain, know the same experience. All of the members of their large extended family had been incarcerated, but they never talked about it. Darrell Kunitomi said he drove his silent father around their native Los Angeles for twenty years. “We used to call him ‘Old Stone Face,’” Darrell said (Kunitomi, 2018).

The Kunitomis practiced a familiar form of coping similar to many families. The evacuation and camp experiences had disturbed them so much that they, like tens of thousands of other Japanese Americans, rarely discussed them. They participated in Japanese American events in Los Angeles, such as the Nisei festivals in Little Tokyo, but they said little about the central shame of the Nikkei experience on the West Coast. It was only after Masa Kunitomi died from cancer in 1985 and her children started having kids of their own that Jack Kunitomi begin to tell his own stories. “We thought our father never talked,” Kerry Cababa said, “but once my mother died, he started talking and he never stopped” (Cababa, 2018).

The Sansei generation that came of age in the 1960s helped the Japanese American community evolve, confront its past and try to heal. Encouraged by the civil rights movement of African Americans and the anti-Vietnam War movement, Japanese Americans began to learn more of their history and wonder why more had not been done. Gradually, they learned of the incarceration of which their parents had said little. They demanded more Asian American studies on college campuses and they pushed the Nisei generation to argue for redress for the incarceration that had stripped the community of much of its wealth.

The push for redress for the incarceration gained strength during the 1970s as a new generation of JACL leadership, which included former Heart Mountain incarceree Raymond Uno, led the way. In 1980, Congress passed a law creating a commission to study the incarceration, and the commission’s hearings in 1981 led to a report two years later that urged for the payment of reparations and a government apology to those who were incarcerated. It would take until 1988 for Congress to pass and for President Ronald Reagan to sign the Civil Liberties Act.

Even after the Civil Liberties Act, the Japanese American community remained split over the actions of the draft resisters. It would take the activism of former incarcerees, such as members of the extended Uno family and former Heart Mountain incarceree Paul Tsuneishi, that the resisters were brought back into the greater community. The Heart Mountain Wyoming Foundation has been particularly active in telling the accurate history of the resisters.

The Shackles of a Myth

Much of the postwar reputation of Japanese Americans comes from a continuation of the misunderstanding of the Japanese culture that has existed from the moment the first immigrants arrived in this country. Characteristics such as reserve, quiet and consensus seeking never meant that Japanese Americans did not want or could not assimilate into wider society, as many of the racists insisted, just as these characteristics did not mean that Japanese Americans accepted or were not affected by their unjust imprisonment during World War II.

Many second-generation Japanese Americans were deeply traumatized by their incarceration. They buried their shame in workaholism, believing that only through obsessive work could they gain acceptance by wider society. Higuchi's father spent so much time in his research laboratory that his family rarely saw him. He was not alone.

The community's hard work and relative silence led social scientist John Petersen to dub them the Model Minority that gained its acceptance by white-dominated society through hard work and good cheer. They endured and overcame their unfair treatment by simply working harder than everyone else. Their children kept quiet, studied harder and sublimated their ethnicity by acting whiter than even their fellow white students.

"Barely more than 20 years after the end of the wartime camps, this is a minority that has risen above even prejudiced criticism," Petersen wrote in a 1966 *New York Times Magazine* article. "By any criterion of good citizenship that we choose, the Japanese Americans are better than any group in our society, including native-born whites. ... there is no parallel to this success story" (Petersen, 1966).

What Petersen clearly intended as a compliment has, over the last 56 years, become a misleading and debilitating characterization. It stigmatizes African Americans by unfairly comparing their experiences to those of Japanese Americans. It places undue pressure on Asian Americans to live up to false standards of conduct and performance. Asian children who do not enjoy math are made to feel as if they are letting down an entire culture. Asian Americans who do not fit into the white-constructed myth of the Model Minority are made to feel that they are failures or troublemakers.

These beliefs perpetuate the harm created by the Japanese American incarceration and the racism that caused it. Policy makers who fell into the racist trap of abusing Asian immigrant cultures, first the Chinese and then the Japanese, shifted to lauding these cultures' work ethic as a way of denigrating other cultures, such as African American and Hispanic. Too often, Japanese

Americans played along, criticizing other races or ethnic groups just as they had been criticized (Yamato, 2020).

Those attitudes are changing as Japanese Americans have learned more about the incarceration experiences of their parents, grandparents, and great grandparents. They are teaching their history to each other and the wider population. The Japanese American Citizens League, once the tool to enable the incarceration, has become one of the most critical of anti-immigrant policies and a supporter of studies of reparations for African Americans. States are increasingly requiring the teaching of Asian American history to help a changing population understand itself and its fellow citizens.

Breaking the misperceptions and stereotypes that have affected the Japanese American community has taken the 80 years since 120,000 people were incarcerated for the crime of looking like the enemy. It will take even longer before it ever truly goes away, but eradicating these myths can only happen if our culture understands what happened starting on December 7, 1941, and resolves that it never happens again.

References

ACLU takes issue with Okamoto. (1944, April 15). *Heart Mountain Sentinel.*

Anti-Japanese league forming. (1905, March 8). *San Francisco Chronicle.*

Aratani, L. (2018, April 6). Secret use of census info helped send Japanese Americans to internment camps in WWII. *Washington Post.* https://www.washingtonpost.com/news/retropolis/wp/2018/04/03/secret-use-of-census-info-helped-send-japanese-americans-to-internment-camps-in-wwii/

Bureau of the Census. (1940). *Sixteenth Census of the United States: 1940*. United States Department of Commerce.

Cababa, K. (2018, July 26). Interview by R. Locker.

Clark, T. (1972, October 17). Interview by J. N. Hess. Truman Library and Museum.

Clark, T. (1973, February 8). Interview by J. N. Hess. Truman Library and Museum.

Commission on Wartime Relocation and Internment of Civilians. (1983). *Personal justice denied*. University of Washington Press.

Daniels, R. (1962). *The politics of prejudice: The anti-Japanese movement in California and the struggle for Japanese exclusion*. University of California Press.

Gage, B. (2022). *G-Man: J. Edgar Hoover and the making of the American century*. Viking.

Hanaoka, W. Y. (1942, July 3). *History of present disease for Fumi Saito*. Records about Japanese Americans Relocated during World War II, created 1988–1989, documenting the period 1942–1946. Record Group 210. National Archives Building.

Higuchi, J. (1990). *Chiye Higuchi biography.*

Higuchi, S. A. (2020). *Setsuko's Secret: Heart Mountain and the legacy of the Japanese American incarceration*. University of Wisconsin Press.

Higuchi, W. (2018, July 6). Interview by R. Locker.

Hoshizaki, T. (2010, July 28). Interview by T. Ikeda, J. Gatewood, and D. Hoshide.

Imai, S. (2013). The Immigration Act of 1924. In *Densho Encyclopedia*. https://encyclopedia.densho.org/Immigration%20Act%20of%201924

Irons, P. (1983). *Justice at war: The story of the Japanese internment cases*. University of California Press.

Ishii, A. U. (1973, July 9, 20). Interview by B. Mitson and K. Mitchell. California State University, Fullerton Oral History Program Japanese American Project.

Japanese and others. (1905, April 15). *San Francisco Chronicle.*

Kaur, H. (2021, April 12) Early Chinese Americans were blamed for diseases and denied health care so they built their own hospital. CNN. https://www.cnn.com/2021/04/12/us/chinese-hospital-sf-chinatown-disease-outbreaks-trnd/index.html

Kunitomi, D. (2018, February 18). Interview by S. A. Higuchi.

Lim, D. (1990). *Position and action on resisters and the WRA segregation process*. Conscience and the Constitution. https://resisters.com/conscience-and-the-constitution/

Lyon, C. (2015). Santa Anita riot. In *Densho Encyclopedia*. https://encyclopedia.densho.org/Santa_Anita_riot/

Mass, A. (2014). From prejudice and incarceration to reconciliation and healing. In *Heart: From Tragedy to Triumph at Heart Mountain* (p. 57).

Miyoshi, N. (1998, March 13–15). *Identity crisis of the Sansei and the Concentration Camp*. Sansei Legacy Project. http://www.momomedia.com/CLPEF/sansei/identity.htm

Munson, C. (1941). *Japanese on the West Coast*. U.S. State Department.

National Park Service (2022, June 10). A legacy of the Far East. https://www.nps.gov/gosp/learn/historyculture/a-legacy-from-the-far-east.htm

Nelson, D. W. (1976). *Heart Mountain: The history of an American Concentration Camp*. State Historical Society of Wisconsin for the Department of History, University of Wisconsin.

New Pittsburgh hostel opened. (1945, June 30). *Heart Mountain Sentinel.*

Petersen, W. (1966, Jan. 9). Success Story, Japanese-American Style. *New York Times.*

Project director urges early relocation plans. (1945, June 30). *Heart Mountain Sentinel.*

Public Broadcasting Service. (2006). *Chinese immigrants and the gold rush*. https://www.pbs.org/wgbh/americanexperience/features/goldrush-chinese-immigrants/

Reeves, R. (2015). *Infamy: The shocking story of Japanese American internment in World War II*. Henry Holt

Robinson, G. (2015, Sept, 18). Native Sons of the Golden West/Native Daughter of the Golden West. *Densho Encyclopedia*. https://encyclopedia.densho.org/Native_Sons_of_the_Golden_West/Native_Daughters_of_the_Golden_West/

Saito, A. (2009, February 28). Interview by V. Yuille.

Sakatani, H. (2010, August 31). Interview by T. Ikeda.

Three hostels serving as temporary lodgings for Seattle relocatees. (1945, June 30). *Heart Mountain Sentinel.*

Tolan Committee (1942). Report of the Select Committee Investigating National Defense Migration, Part 29, 11137–48.

Trussell, C. P. (1942, February 7). Spy data sought from 1940 Census. *New York Times*.

United States War Relocation Authority. (1943). *Property receipt undated Osako Uno.* Records about Japanese Americans Relocated during World War II, created 1988–1989, documenting the period 1942–1946. Record Group 210. National Archives Building.

United States War Relocation Authority. (1945, May 28). *Physical Examination for Iyekichi Higuchi*. Records about Japanese Americans Relocated during World War II, created 1988–1989, documenting the period 1942–1946. Record Group 210. National Archives Building.

Yamato, S. (2020, July 3). Through the fire: Are we Japanese Americans racist? *Rafu Shimpo*. https://rafu.com/2020/07/through-the-fire-are-we-japanese-americans-racists/

Yang, J. L. (2020). *One mighty and irresistible tide: The epic struggle over American immigration, 1924-1964*. Norton.

Years of uselessness. (1944, July 1). *Heart Mountain Sentinel.*

Yoshida, Y. (1909). Sources and causes of Japanese emigration. Annals of the *American Academy of Political and Social Science, 34*(2), 157–67. https://doi.org/10.1177/000271620903400219

Special Attributions

The photograph at the beginning of this article is an adaption of an original that depicts two little girls descending from a truck on arrival at the station in Granada, Colorado, where they were to board trains for the West Coast. Evacuees from the Granada Relocation Center, also known as Camp Amache, were waiting for trains to return to their former homes in California, Oct. 6, 1945. The original photograph is the work of Hikaru Iwasaki that is in the public domain from the National Archives. The original was used in a 2017 Colorado Public Radio article by Shanna Lewis on an airing about the 75th anniversary of the Japanese internment camps per: https://www.cpr.org/show-segment/denvers-japanese-community-marks-75-years-since-executive-order-led-to-internment-camps/

Efficacy of Self-Assessment Interventions During COVID-19 Quarantine

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This study was funded through a Texas A&M University-Corpus Christi research enhancement grant. The study protocol was reviewed by the Texas A&M University Institutional Review Board (IRB) on 11/30/2020, assigned ID Number 2020-11-117 and determined to be exempt, under Category 2 because it constituted only minimal risk. The authors have no conflicts of interest.

Abstract

Noncompliance with healthcare treatment is a significant issue in rural communities, further exacerbated by coronavirus pandemic. Engaging patients in self-assessment practices may be the key to improving healthcare compliance rates. This study reports on the efficacy of a telehealth-based self-assessment program implemented with a sample of 20 COVID-19-

positive patients who were receiving services at a Federally Qualified Health Center (FQHC) in South Texas that were asked to quarantine at home. The results indicate that participation in the telehealth intervention resulted in a statistically significant decrease in depressive symptomology and a marked improvement in compliance with healthcare directives and attendance at follow-up appointments with primary care providers.

Keywords: COVID-19, self-assessment, telehealth, rural communities, mental health

Introduction

The novel Coronavirus disease 2019 (COVID-19), a disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first discovered in December 2019 in Wuhan, China (Centers for Disease Control and Prevention [CDC], 2021). Since its identification, COVID-19 has transitioned from a localized epidemic outbreak to a global pandemic infecting millions of individuals worldwide (Terpos et al., 2020). Although it primarily manifests as a respiratory tract infection, researchers have found evidence suggesting COVID-19 also can be regarded as a systemic disease involving cardiovascular, respiratory, gastrointestinal, neurological, hematopoietic, and immune systems (Bangash et al., 2020; Driggin et al., 2020; Mehta et al., 2020). While the impact of COVID-19 has been felt by all (CDC, 2020), its influence on vulnerable rural counties is more pronounced as these counties often face a higher burden in terms of deaths per capita and reduced availability of medical resources (Knocke et al., 2021). These adverse conditions have been particularly evident in South Texas.

The COVID-19 pandemic dramatically altered primary care processes and the delivery of healthcare services for many individuals across South Texas. Adjusting to pandemic restrictions, the changing incidence of COVID-19 in the communities, abiding by public health recommendations, and facing the plethora of health care obstacles is, inevitably, an ongoing challenge. Circumstances such as effective communication, lack of insurance, access to care other than emergency services, cultural vulnerabilities, patient anxiety, lack of education, and financial instability are hindrances to healthcare. Consequently, South Texas recently was spotlighted as a national hotspot for the consistently increasing incidence of COVID-19, with local officials positing that they are at the epicenter of the coronavirus in the United States (Villarreal, 2020). Exacerbating the problem is the chronic underutilization of healthcare services throughout the area.

The uninsured population in the United States, particularly those in the rural regions of Texas, often experience delays to receiving their healthcare needs. Due to a lack of healthcare, the healthcare consequences vary in clinical magnitude. While primary care provides healthcare consistency, there are numerous explanations for primary care avoidance. Commonplace are cultural barriers, communication difficulties, transportation limitations, or financial hardships due to the economic challenges of poverty. Unfortunately, the resulting costs of emergency care for the uninsured population fall disproportionately on federal, state, and local communities, creating a financial burden for the taxpayer and consumer of healthcare services (Institute of Medicine, 2003). To address this issue, the federal government established Federally Qualified Health Centers (FQHCs) to provide care for lower and uninsured socioeconomic populations in these areas. The option for FQHC healthcare access for the underserved avoids costly, sporadic, or inconsistent interventions provided by urgent care or emergency care facilities that the primary care option could have provided. However, for those uninsured with primary healthcare support from community health centers, the failure to attend primary care appointments is a significant problem. The inability to comply with primary care appointments contributes to poorer health outcomes, poor chronic disease control, and continuous healthcare quality difficulties (Kaplan-Lewis & Percac-Lima, 2013).

Research on medical compliance behavior to secure organizational scheduling and treatment processes requires emphasizing efficiency and effective use of resources. Unfortunately, a no-show trend, particularly in rural communities, is an ineffective use of healthcare provider time, resulting in a potential loss of healthcare funding that may reflect on the community's overall health status. For the underserved population, COVID-19 further magnified the inherent difficulties, such as communication, transportation, healthcare access, and funding. Quarantine requirements are complicated with the inherently limited resources of the underserved. The authors designed a telehealth-based self-care management protocol for COVID-19-positive quarantined patients to understand these challenges. Furthermore, this month-long intervention program was designed in a manner that empowers patients to participate proactively in their recovery and long-term primary and behavioral healthcare.

After opting to use a telehealth intervention, the authors implemented this healthcare platform to provide quality patient care to meet COVID-19 healthcare requirements. Telehealth can avoid accessing emergency services and provide a patient-centered approach to meet their needs (Elliott, et al., 2020). The primary goal of the patient-centered approach was to provide optimal healthcare for the patients and treat their COVID-19 symptoms safely and effectively. Establishing a healthcare relationship by incorporating telehealth interventions was vital, thus increasing optimal patient engagement, active participation, and a personal investment in primary care for healthcare services. The goal was to decrease patient anxiety or depression and increase future primary care appointment adherence.

Additionally, this study focused on self-assessment because patients' ability to self-manage increases feelings of empowerment, thereby building self-confidence. Specifically, the participants were asked to monitor their vital signs and report their oxygen saturation levels, body temperature, and blood pressure using provided tools (pulse oximeter, digital thermometer, and blood pressure monitor). Their behavioral health also was assessed to understand how quarantine may have been impacting their mental health. Quarantine restrictive experiences can aggravate feelings of social isolation, loneliness, anxiety, or depression. Researchers have shown that a lack of social visitation also can result in a lack of belonging, which can lead to feelings of anxiety, depression, resulting in poor patient outcomes (Miller, 2019). Ongoing assessment for adverse mental health symptoms may provide insight into managing risk determinants and appropriate referral options for potential further treatment.

With our intervention, data was collected to address the following research questions: (1) Do regularly scheduled telehealth consultations assist in mitigating depressive symptoms among COVID-19-positive patients in quarantine? and (2) Will a relationship with the primary care provider, through routine scheduled telehealth consultations, improve self-assessment interventions and increase patient investment to comply with future primary care appointments?

Method

Participants and Procedure

After receiving a determination from the local IRB in November 2020 that the project was exempt under Category 2 because it constituted only minimal risk, the researchers sought to recruit a sample. It was determined that outpatient management would be the most appropriate venue to recruit participants to engage in the project's telehealth consultation intervention. Therefore, the research team partnered with a local federally qualified health center (FQHC) in Corpus Christi, Texas. The FQHC's patient population is predominantly Hispanic and low-income, increasing the levels of racial and ethnic disparities in the sample.

Given the nature of COVID-19 and the complications associated with requiring patients with a positive diagnosis to attend unnecessary in-person medical visits, the research team mitigated risks by transitioning the continuum of care to home self-management with regularly scheduled telehealth appointments. Additionally, to ensure quality care for patients during their quarantine period, the researchers determined it essential that their intervention incorporated holistic interventions with comprehensive physical and behavioral healthcare components, until the patients fully recovered. This plan included an option for patients to schedule follow-up visits with their FQHC primary care provider to safeguard the continuity of care. They recruited 20 positive COVID-19 patients for this study using a convenience sampling approach at their local federally qualified health center (FQHC).

Since these patients presented with mild symptoms, the local FQHC primary care provider sent them home to recover in quarantine. Prior to clinic discharge, the primary care provider communicated the intent to monitor and track the patient in the home setting, using the equipment provided by the FQHC. The use of the telehealth platform was addressed with the patient. Further, FQHC staff verified that of the 20 participants, all owned a personal computer and there were no expressed difficulties accessing Telehealth options for healthcare. Discussion regarding the frequency of the telehealth appointments, contact information, and ability to access with their own personal computer was confirmed, as well as no access issues for ongoing FQHC telehealth monitoring. The patients verbalized no language difficulties. One patient lived alone and revealed no discomfort with the home computer.

An FQHC RN accomplished a home visit within 24 hours of the initial appointment, confirming the positive COVID-19 diagnosis. The patients with underlying medical conditions were prioritized on the RN's home appointment schedule, due to their elevated risk of developing COVID-19 complications. The patients were thoroughly screened for fever, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, loss of smell or taste, sore throat, congestion, nausea or vomiting, and diarrhea. A PHQ-9 screening was included along with the pulse oximeter, temperature, and blood pressure recordings to assess for changes in their mood and affect associated with the disease and subsequent quarantine. The visiting RN provided instructions for use of the equipment provided by the FQHC (a pulse oximeter, thermometer, and electronic BP cuff). To ensure the participants were competently using the equipment for their self-care, the RN monitored their initial use of the equipment by the patient to confirm accuracy of self-monitoring.

Prior to departing the patient's home, telehealth appointments were scheduled with the patient. Accessing the telehealth platform and ensuring continuity of care, the same FQHC, Advanced Nurse Practitioner (APN), was scheduled to assess the patient daily for five days and weekly for one month. It was also emphasized to the patient, if worsening, to immediately contact the FQHC, or access emergency services.

Most patients had a history of nonadherence to previous healthcare recommendations and noncompliance with their primary care appointments. Each participant was an established FQHC patient for greater than one year. Medical record review accessing the EHR, was used to audit the appointment compliance record for each of the patients.

For the purpose of this study, the research team defined appointment noncompliance as a patient who demonstrated a missed appointment or no-show, did not call 24 hours in advance to cancel their appointment, and/or did not to obtain necessary labs one week prior to said appointment. Of the 20 established FQHC participants, 16 met the definition of noncompliance at least three times in a one-year period.

Overall, the patients in the sample (10 female, 10 male) ranged from 18 to 71 years of age, with an average age of 41.3 years (*SD* = 18.02). Regarding ethnicity, 85% (*n* = 17) of the patient sample identified as Hispanic/Latino(a). Three (15%) patients had to be hospitalized due to their presenting COVID-19 symptoms.

The researchers scheduled daily telehealth sessions with the patients in quarantine for five days to determine their ongoing physical and behavioral health status. During the first telehealth session, the primary care provider (APN) assessed the patient's disease progression and symptoms and inquired about their ease of instrument use with the data collection tools previously provided by the FQHC. In addition to collecting the data recorded with the self-assessment tools, the APN engaged each patient to discuss their experiences. These discussions focused on illness, physical and emotional status, and the appropriate use of the instrument measurements. These measurements were accomplished by the patients during the telehealth visit with APN visual oversight. Patient education was included in each visit, incorporating descriptive adjectives into our discussions. Effort to avoid patient description difficulties, garner further patient details, avoid generalities, and increase patient engagement was a priority for the APN. For each telehealth visit, the APN also accomplished a PHQ-9.

The researchers also documented each telehealth appointment appropriately for entry into the electronic health record. They recommended referrals for pulmonology evaluation or to emergency care services if they assessed reported data as evidence of minimal improvement or worsening. Upon completing their quarantine requirements, the team followed each patient with monthly appointments for six months at the FQHC clinic. To ensure continuity, the same primary care APN, following the patient routinely since the initial telehealth appointment, was scheduled with the patients.

Measures

The research team provided all patients with the self-assessment tools needed to evaluate, track, and manage their disease during quarantine. They reviewed their options carefully as they wanted to avoid exceeding patients' capacity, openness to telehealth, or literacy levels. Ultimately, the team determined that each patient would receive a pulse oximeter, digital thermometer, and blood pressure monitor as researchers have identified oxygen saturation levels, body temperature, and blood pressure as potential markers correlated with COVID-19 (National Health Service [NHS], 2021; Pasha et al., 2021; Tharakan et al., 2020). To ensure the fidelity of the data they collect, the research team educated the patients on the effective use of each tool and how to record their results.

In addition, the researchers assessed patients' mental health using the Patient Health Questionnaire-9 (PHQ-9, Kroeke et al., 2001). The PHQ-9 is a nine-item scale used to measure depression severity based on the diagnostic criteria listed in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) for major depressive disorder. The team opted to include the PHQ-9 to assess the impact enforced social isolation and stay-at-home recommendations might have on a patient's mood and affect because it is a quick and easy measure with strong psychometric properties. Among primary care patients, researchers noted strong internal reliability for the PHQ-9 with a Cronbach's alpha of .86 (Kroenke et al., 2001). Additionally, the diagnostic validity of the PHQ-9 has been established across multiple studies in various medical settings (Gilbody et al., 2007). Tracking these outcomes can provide early indicators of potential increases in the demand for mental health services and the healthcare providers needed to treat persons with clinically significant symptoms. With the PHQ-9, participants respond to each item using a 4-point Likert-type scale with values ranging from 0 (*not at all*) to 3 (*nearly every day*). For each item, individuals are asked to consider how often they have been bothered by the problem specified over the last two weeks. Item scores are summed to produce a total score. Total scores range from 0 to 27, with higher scores indicating greater depression severity. Scores between 5-9, 10-19, and 20-27 represent mild, moderate, and severe levels of depression, respectively.

Results

Research Question 1

To assess for statistically significant differences in PHQ-9 scores across the three administrations of the instrument, the researchers conducted a repeated-measures analysis of variance (r-ANOVA). Before running the analysis, they tested normality and sphericity model assumptions. Because Mauchly's Test of Sphericity indicated that the assumption of sphericity had been met, $\chi^2(2) = 4.94, p = .085$, no corrections were made to the test statistic. A significant effect of time on PHQ-9 scores, $F(2, 36) = 6.50, p = .004$, with a large effect (partial $\eta^2 = .265$) was noted. Follow-up pairwise Comparisons (using the Bonferroni correction method) revealed no significant difference between the first ($M = 7.32$) and second administrations ($M = 6.95$) but significant differences between the third administration ($M = 4.79$) and the first two administrations. By the third administration, patients' depression severity scores had decreased to a level consistent with the experience of minimal depression.

Research Question 2

To determine whether self-assessment increased the likelihood that patients would actively participate in their healthcare, the research team examined follow-up activity six months following the quarantine period and intervention. Participants in the sample had an 85% compliance rate with scheduled healthcare provider appointments at their local FQHC. This rate marks a significant increase over the 50% average for the FQHC. By actively participating in self-assessment and engaging in meaningful therapeutic relationships with providers, patients' desire to continue seeking medical care improved.

Discussion

At the onset of the COVID-19 pandemic, FQHC primary care providers increased their use of telehealth communication. To effectively use this medium, providers were required to embrace flexibility, establish interpersonal continuity, understand the sources of patient anxiety, and develop an inter-reliant patient-provider relationship conducive to optimal healthcare outcomes. Due to the novelty of quarantining, the lack of human contact and regular communication left many patients experiencing feelings of loneliness and social isolation. Furthermore, the lack of socialization can lead to anxiety, depression, and poor patient outcomes (Jia et al., 2021). Therefore, recognizing these adverse experiences is critical for providers to communicate genuine empathy for their patients. Throughout this study, the initial FQHC RN and subsequent APN interviewing our sample patients were open to the patients' emotional experiences and fully understood the validity of the feelings expressed.

Physical Health Outcomes

Overall, the researchers found that for COVID-19-positive patients, healthcare monitoring tools, educational instructions provided by the FQHC, and regularly scheduled telehealth communication with the primary care provider optimized the self-management of their disease. Regularly monitoring respiratory, blood pressure, and oxygen levels were invaluable for healthcare providers who were better able to engage in continuous patient tracking by closely following the data and information received. Additionally, remote management opened the window of the patient's home experience, allowing the healthcare provider to better view and evaluate the patient's health status, including any environmental factors that providers might also need to address. Assessing mental health status to navigate self-management in the patient's immediate surroundings offered a more comprehensive evaluation of the patient's experience.

Behavioral Health Outcomes

During quarantine, participants in this study completed a series of PHQ-9 screenings during each encounter. Scores on these screenings decreased over time. While negligible decreases were noted between the first and second administrations, we found a statistically and clinically significant decrease in the third administration. At this point, patients had more than a two-point decrease in PHQ-9 scores on average. In addition to being a statistically significant difference, the large effect noted highlights the clinical significance of our findings. The scoring directions for the PHQ-9 indicate that scores between 5-9 correspond with a case of mild depression. Average scores on the first and second administrations of the PHQ-9 fell within this range. However, in the third administration, the average score dropped below 5. A score at this level is consistent with experiencing minimal depressive symptoms that would likely not warrant clinical attention. Although a causal relationship could not be determined, we hypothesize that the personal interactions with the RN and APN, combined with a more intentional focus on self-assessment, positively contributed to patients' improved mental health scores.

In addition to data supporting the efficacy of our intervention, most of the patients we worked with verbalized greater comfort and ease as they became more familiar with their provider, engaged in more consistent equipment usage, took ownership of tracking and reporting their data, and engaged in subsequent discussions with our team member. As telehealth communication progressed, patient statements began highlighting specific trends, revealing a decrease in patient anxiety because of the ongoing communication with the primary care provider. The patients demonstrated responsiveness to the provider nurturance demonstrated by timely responses to the scheduled telehealth appointments, data preparation, and asking pertinent questions about their self-management. The primary determinants of attachment behavior were invested in the provider approach (e.g., expressing empathy, warmth, trust, and, most importantly, respect for the patient's circumstances).

For many patients, isolation impairs psychological well-being and happiness. As social beings, humans are programmed to seek social contact and engage in interpersonal communication (Heffernan, 2021). Telehealth encounter preparation is crucial to incorporate seamless communication effectiveness. The success of the provider-patient interaction depends on developing the relationship over time and including a patient-centered care plan tailored to the individual. It also is essential to understand and maintain empathy for the patient experiencing isolation due to a lack of family and friends during the quarantine period. Patient satisfaction garnered from the telehealth relationship is based on trust with widespread implications for further outpatient healthcare participation upon completing the quarantine recommendations.

Post-Intervention Outcomes

After quarantine, patients were tracked for six months to evaluate appointment compliance for their follow-up in-person appointments in the primary care clinic. A consistent compliance pattern was evident across our sample participants. Before their positive COVID-19 diagnosis, the primary care clinic accomplished an EHR audit of the sampled patients, revealing less than 50% appointment compliance rates. After participating in the telehealth consultation intervention and having the opportunity to establish an authentic and therapeutic provider-patient relationship, patients' appointment compliance rates rose to 85%. A consistent compliance pattern was evident across all participants.

Conclusion

Researchers identified three key themes in this research: 1) using the tools for self-assessment for COVID-19 patients for in-home treatment and self-care management is optimal with telehealth technology as an alternative to face-to-face encounters as another dimension of care; 2) using the instruments such as the PHQ-9 to assess the behavioral health of patients at defined intervals was an effective assessment of mental health status and underlining challenges; 3) maximizing the patient's ability to manage home-based care, with scheduled telehealth appointments, improved communication, optimized patient attachment, and the maintenance of a solid therapeutic relationship resulted in improved appointment compliance in the primary care clinic after the completion of quarantine recommendations. It is noteworthy to appreciate the value of telehealth as an effective method of healthcare assessment, treatment, and communication, but there are technology challenges.

The participants were fortunate to have equipment and internet access and technology infrastructure, thus avoiding technology challenges for this research project. Technology challenges in rural and non-rural communities may be the result of the lack of resources for telehealth such as equipment access, financial constraints for technology infrastructure or the cognitive barriers with hearing or vision disabilities. During the COVID pandemic, emergency legislative laws or policies to support telehealth implementation increased, thus increasing opportunities in rural communities to expand telemedicine. Several state governors issued emergency orders to increase access to telehealth services and increase the pool of available healthcare providers (American Psychological Association [APA], 2021).

Upon Reflection

The cost of no-show appointments is widely studied and evaluated in the healthcare industry. Most noteworthy, no-shows potentially pose health risks for patients, decreasing healthcare quality. Automated reminder procedures, penalization, and overscheduling methods do not significantly improve no-show levels, as no-shows continue to negatively plague the healthcare system.

Our research investigated the use of telehealth technology to better support the healthcare needs of COVID-19 patients during quarantine. The study further confirmed increasing provider-patient communication by the use of telehealth technology significantly improved clinic appointment compliance for those patients with a past history of appointment noncompliance.

On reflection, we concluded it is crucial for healthcare providers to comprehensively understand the value of personalized healthcare for their clinic populations. The design and delivery of telehealth interventions not only increased the health status of COVID-19 quarantined patients but channeled our patients into returning to the healthcare organization after quarantine. We concluded the importance generating improved provider-patient relationships and focusing on familiarity had on improved clinic patient compliance and employed optimal health outcomes.

Monitoring the participants for key physical changes during COVID quarantine and accessing the clinic telehealth system reduced the risks of hospitalization due to disease progression. Success of participant self-management was supported by these baseline components: essential supplies for self-assessment, consistent clinic staff guidance provided for the participants to safely use the physical assessment tools during quarantine and scheduled telehealth contact with the primary care provider to proactively follow the participants. Understanding the stress quarantine, uncertainty and anxiety for the participants was of upmost importance. Recognizing and addressing potential physical and mental health problems associated with home confinement was paramount, necessitating timely implementation of telehealth communication and participant engagement. The blend of these components was fundamental for positive and successful healthcare management.

References

American Psychological Association [APA] (2021). *Telehealth guidance by state during COVID-19*. https://www.apaservices.org/practice/clinic/covid-19-telehealth-state-summary

Bangash, N. M., Patel, J., & Parekh, D. (2020). COVID-19 and the liver: Little cause for concern. *Lancet Gastroenterology & Hepatology, 5*(6), 529-530. https://doi.org/10.1016/S2468-1253(20)20084-4

Center for Disease Control [CDC] (2021). *Basics of COVID-19*. https://www.cdc.gov/coronavirus/2019-ncov/your-health/about-covid-19/basics-covid-19.html

Center for Disease Control [CDC]. (2020). I*ntroduction to COVID-19 Racial and Ethnic Health Disparities*. https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html

Driggin, E., Madhavan, M. V., Bikdeli, B., Chuich, T., Laracy, J., Biondi-Zoccai, G., Brown, T. S., Der Nigoghossian, C., Zidar, D. A., Haythe, J., Brodie, D., Beckman, J. A., Kirtane, A. J., Stone, G. W., Krumholz, H. N., & Parikh, S. A. (2020). Cardiovascular considerations for patients, healthcare workers, and health systems during the COVID-19 pandemic. *Journal of the American College of Cardiology, 75*(18), 2352-2371. https://doi.org/10.1016/j.jacc.2020.03.031

Elliott, T., Tong, I., Sheridan, A., & Lown, B. A. (2020). Beyond convenience: Patients' perceptions of physician interactional skills and compassion via telemedicine. *Mayo Clinic Proceedings: Innovations, Quality, and Outcomes, 4*(3), 305-314. https://doi.org/10.1016.j.mayocpigo.2020.04.009

Gilbody, S., Richards, D., Brealey, S., & Hewitt, C. (2007). Screening for depression in medical settings with the Patient Health Questionnaire (PHQ): A diagnostic meta-analysis. *Journal of General Medicine, 22*(100), 1596-1602. https://di.org/10.1007/s11606-007-0222-y

Heffernan, T. (2021). Lockdown, quarantine and self-isolation: how different COVID restrictions affect our mental health. *The Conversation*. https://theconversation.com/lockdown-quarantine-and-self-isolation-how-different-covid-restrictions-affect-our-mental-health-153595

Institute of Medicine. (2003). *Hidden costs, values lost: Uninsurance in America*. The National Academies Press. https://doi.org/10.17226/10719.

Jia, H., Guerin, J. R., Barile, P. J., Okun, H. A., McKnight-Eily, L., Blumberg, J. S., Njai, R., & Thompson, W. W. (2021). National and State Trends in Anxiety and Depression Severity Scores Among Adults During the COVID-19 Pandemic-United States, 2020-2021. Centers for Disease Control and Prevention. https://www.cdc.gov/mmwr/volumes/70/wr/mm7040e3.htm

Kaplan-Lewis, E., & Percac-Lima, S. (2013). No-show to primary care appointments: Why patients do not come. *Journal of Primary Care & Community Health, 4*(4), 251-255. https://doi.org/10.1177/2150131913498513

Knocke, K., Malone, T., Thomas, S., Friedman, H., & Planey, A. (2021). COVID-19 disproportionately impacts more vulnerable rural hospitals and communities. *Health Services Research, 56*(52), 84. https://doi.org/10.1111/1475-6773.13840

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Mehta, P., McAuley, D. F., Brown, M., Sanchez, E., Tattersall, R. S., & Manson, J. (2020). COVID-19: Consider cytokine storm syndromes and immunosuppression. *The Lancet, 395*(10229), 1033-1034. https://doi.org/10.1016/S0140-6736(20)30628-0

Miller, J. V. (2019). Investigating barriers to family visitation of nursing home residents: A systematic review. *Journal of Gerontological Social Work, 62*(3), 261-278. https://doi.org/10.1080/01634372.2018.1544957

National Health Service [NHS] (2021). *Pulse oximetry to detect early deterioration of patients with COVID-19 in primary and community care settings*. http://www.england.nhs.uk/coronavirus/publication/pulse-oximetry-to-detect-early-deterioration-of-patients-with-covid-19-in-primary-and-community-care-settings/

Pasha, M., Brewer, C. L., Sennhauser, S., Alsawas, M., & Murad, M. H. (2021). Health Care Delivery Interventions for Hypertension Management in Underserved Populations in the United States: A Systematic Review. *Hypertension*, 955-965. https://doi.org/10.1161/hypertensionaha.120.15946

Terpos, E., Ntanasis-Stathopoulos, I., Elalamy, I., Kastritis, E., Sergentanis, T> N., Politou, M., Psaltopoulou, T., Gerotziafas, G., & Dimopoulos, M. A. (2020). Hermatological findings and complications of COVID-19. *American Journal of Hematology, 95*(7), 834-847.

Tharakan, S., Nomoto, K., Miyashita, S., & Ishikawa, K. (2020). Body temperature correlates with mortality in COVID-19 patients. *Critical Care 24*, 298. https://doi.org/10.1186/s13054-020-03045-8

Villarreal, A. (2020). The hotspot of a hotspot of a hotspot: coronavirus takes heavy toll in South Texas. *The Guardian*. http://www.theguardian.com/us-news/2020/jul/29/texas-hidalgo-county-border-mexico-coronavirus

A Local Government Response to COVID-19 and Health Disparities

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Author Note

The authors acknowledge the Office of the Assistant Secretary for Health and the Office of Minority Health of the U.S. Department of Health and Human Services (HHS) for providing funds to support this initiative. The program and research activities of this initiative were submitted to the Institutional Review Board for a full review and the authors received approval to conduct the study on August 31, 2021 (Protocol # HS-2021-4617).

Abstract

Efforts to address COVID-19 disparities in an urban city present their own challenges, especially if the city does not have a local health department. This article reviews emerging public health strategies that state and local government leaders can use to mitigate COVID-19 related health disparities. Specific strategies that have been identified to address COVID-19 health disparities among racial and ethnic minority communities and support the establishment of a local health department in an urban community are also discussed.

Keywords: COVID-19, health disparities, local health department, healthcare

Introduction

Racial disparity in health has been a long-standing issue in our society that has lasted through generations and continues to affect the health of millions of people. The Office of Disease Prevention and Health Promotion (OASH, n.d.) of the United States Department of Health and Human Services defines a health disparity as:

> A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.

In recent times, the COVID-19 pandemic has highlighted health disparities across groups based on social, racial, ethnic, economic and environmental characteristics (National Conference of State Legislatures, 2021). Persistent racial disparities in health status, access to healthcare, wealth and income, employment, housing, and poverty all contribute to greater susceptibility to the COVID-19 virus among minority populations (Wilson, 2020). Furthermore, Rubin-Miller et al. (2020) reported that Black, Hispanic, and Asian patients in 399 hospitals across 21 states had higher hospitalization rates due to social and economic inequities and barriers to care associated with the COVID-19 virus. Across the United States, the lack of access to healthcare has been a major contributing factor to the spread of the COVID-19 virus among minority populations. In fact, Magesh, John, Li, et al. (2021) noted that decreased access to care was positively associated with COVID-19 positivity among Hispanic and African American individuals. Access to healthcare with timely COVID-19 testing and mitigation measures (e.g., public health prevention practices and vaccination) for all segments of the population is critical (Weiss & Paasche-Orlow, 2020) in reducing COVID-19 rates.

To meet the needs of the community, many local government leaders have established a sense of urgency to improve access to COVID-19 services and public health information among racial and ethnic minority populations at the highest risk for experiencing disparities in COVID-19 outcomes. Examples of severe outcomes of COVID-19 include hospitalization with a diagnosis of acute respiratory failure, admission to the intensive care unit (ICU), need for noninvasive ventilation, mechanical ventilation, or death (Yek et al., 2022). Significant improvements in public health and healthcare practices are needed in order to adequately address these emerging disparities across racial and ethnic minority populations.

An overview of six public health strategies that local government leaders can use to reduce COVID-19 health disparities among minority populations are discussed. This article also presents public health strategies that were developed by local government leaders and community-based partners to improve access to COVID-19 services and reduce COVID-19 health disparities among racial and minority populations in an urban community.

Responding to COVID-19 and Health Disparities

The COVID-19 virus has required leaders in government to respond quickly to health disparities in order to minimize the threat to public health in their local communities (Wilson, 2020). Through this effort, many government leaders are focused on identifying effective strategies to reduce COVID-19 disparities among minority populations within their communities. The following strategies have been identified as possible activities that state and local government leaders could implement to mitigate COVID-19 related health disparities (Health Management Associates, 2021):

1. Develop a health equity strategy focused on reducing disparities within specific target communities.

2. Establish partnerships to unite efforts to address health inequities in the community.

3. Use of community health workers to disseminate health information, promote public safety measures, share knowledge on preventive care and healthy lifestyles, and help communities overcome vaccine hesitancy.

4. Conduct community assessments to help identify communities of focus for implementing intervention strategies to increase vaccine confidence.

5. Evaluate and improve race and ethnicity data flow to identify gaps of health disparities in the community.

6. Assess the status of the COVID-19 response to date in order to determine what has worked well, what has not worked, and what can be done differently moving forward.

Government leaders must see the importance of implementing public health strategies on an ongoing basis to mitigate the impact of the COVID-19 virus. In cities without a COVID-19 response, minority populations are put at greater risk of suffering health disparities.

Addressing COVID-19 Disparities Within an Urban City

In most cities without a local health department, the county's health department is responsible for coordinating the COVID-19 response efforts in hopes of reaching individuals in the community. Normally, this may be enough; however, during the COVID-19 pandemic, it has become apparent that additional COVID-19 response efforts are needed to meet the needs of racial and ethnic minority populations in the community. It is critical that local government leaders commit to establishing a local health department and designating leaders to oversee the COVID-19 response among underserved racial and ethnic minority populations in the community.

Just recently, local government leaders within an urban city received federal funds to support the establishment of a local health department to coordinate the city's COVID-19 response and address health disparities. To this end, local government leaders and community-based partners identified the following public health strategies to improve access to COVID-19 services and address health disparities among racial and minority populations in an urban area.

1. Disparities Impact Strategy: During the initial phase of receiving grant funds for this initiative, the HHS Office of Minority Health required grant recipients to prepare a Disparity Impact Statement to identify and address health disparities among racial and ethnic minority populations within the specified communities. Consequently, to help create a strategic focus with the goal of addressing COVID-19 health disparities among minority populations in the community, the local government leaders and partners developed a Disparity Impact Statement. The local government department also used the Disparity Impact Statement as a framework to monitor the extent to which the target population was reached regarding access to COVID-19 vaccination, testing, and other related healthcare services.

2. Community Engagement: The United States has a long history of unethical medical studies and laws that have created mistrust among racial and ethnic minority populations. Two of the most infamous medical studies are the Tuskegee study that tested the long-term effects of untreated syphilis in African American men (Jones & Reverby, 2022) and the case of Henrietta Lacks' cells being used for research without her or her family's consent (Khan, 2011). The consequences of these studies can be seen clearly when the vaccination rates for COVID-19 are analyzed by race and ethnicity in various communities throughout the United States. With this in mind, a primary focus of this initiative entailed mobilizing local community stakeholders and leaders in the development and implementation of culturally appropriate strategies that the community could embrace to support the delivery of COVID-19 services among the various targeted communities. In addition, with the aim of gathering input and building relationships with individuals in the local community, the local health department established a community advisory council consisting of community members, professional experts, and partners representing several community-based organizations. The primary role of the advisory council members includes offering guidance and supporting the implementation of community outreach events, vaccine clinics, and health education workshops.

3. Community Awareness Campaign: At a time when citizen trust is of utmost importance, a surge in disinformation is undermining government responses to the COVID-19 pandemic and putting people's health at risk (Organization for Economic Co-operation

and Development, 2020). To communicate accurate information about COVID-19 and ensure equitable awareness of vaccine eligibility and accessibility, the local health department created an awareness campaign among the targeted communities. The campaign utilizes social media, billboards, radio ads, informational webinars, and culturally appropriate COVID-19 educational materials in an effort to reach individuals in the community.

4. Community Health Navigators: The integration of registered licensed nurses that are employed by the local health department was identified as a tangible way to improve COVID-19 service delivery within the local communities. The local health department hired Community Health Navigators (i.e., licensed registered nurses) to provide COVID-19 related services to individuals in the targeted communities and work with partnering community-based organizations to conduct outreach in accessible locations, including the local community centers, churches, libraries, schools, nonprofit organizations, and medical clinics.

5. Training: From time to time, when registered nurses are transitioning from clinical to community-based settings, they may feel the need to obtain specific training associated with reducing health disparities among diverse racial and ethnic minority populations. At the onset of providing services on this funded initiative, some of the registered nurses indicated that they find it difficult to have meaningful conversations with various racial and ethnic minority populations in the community. Without appropriate training for the registered nurses, it became apparent that the services offered by this initiative would likely not result in the improvement of health outcomes among racial and ethnic minority populations. To this end, in alignment with the evidence-based practices and the National Culturally and Linguistically Appropriate Services (CLAS) Standards to advance health equity, improve quality, and reduce health disparities, workforce development training (i.e., cultural competency, health literacy, teach-back method) were identified to support the on-going professional development activities of the Community Health Navigators and community-based partners. Every six months, the local health department seeks to provide professional development training to support the delivery of services and strategies implemented within the targeted communities.

6. Quality Improvement: As a grant recipient of the HHS Office of Minority Health, awardees are expected to establish and implement an ongoing quality improvement process to determine progress in addressing identified health disparities and possible needs for corrective activities. The quality improvement process also serves as a means to ensure that the policies and procedures of Title VI of the Civil Rights Act of 1964 are adhered to. Title VI states that recipients of federal funds must ensure that individuals are not discriminated on the basis of race, color, or national origin in any program activity, services, or benefits. The employees at the local health department have met weekly to make certain that services and activities are in compliance with Title VI and activities are provided to all of the service recipients equally. Topics of the meetings included several tasks such as creating educational materials and postings both in English and Spanish, discussing the need for language translation services at various events, and evaluating problems and solutions to support the improvement of projected outcomes among the target population.

Conclusion

Although there are several communities that continue to see improvements in COVID-19 health outcomes, many racial and ethnic minority communities are still experiencing COVID-19 disparities. There is no doubt that local government leaders must continue to give attention to implementing a COVID-19 response that focuses on improving COVID-19 outcomes and reducing health disparities among racial and ethnic minority populations.

In response to meeting the needs of urban communities, the establishment of a local health department may be critical. It has been well documented that local health departments are considered the experts on their regions and understand not only the science, but also the unique needs of their communities (National Association of County and City Health Officials, 2020). Therefore, this article describes public health strategies that can be used to support the establishment of a local health department or local government leaders in planning a COVID-19 response and addressing health disparities among racial and ethnic minority populations.

The authors of this article would like to end with two concluding reflections. First, it has been previously mentioned that the local health department hired Community Health Navigators (i.e., registered nurses) to work with partnering community-based organizations to provide COVID-19 related services and conduct outreach events in the targeted communities. Due to the acute shortage of experienced registered nurses, there have been delays in conducting a significant amount of outreach events in the targeted communities. To alleviate this challenge, local health departments are encouraged to offer hiring incentives such as signing bonuses and a longevity bonus to fill vacant registered nursing positions.

The second reflection concerns the area of community engagement. The local health department established a community advisory council to allow community members the opportunity to support the implementation of community outreach events, vaccine clinics, and health education workshops. Council members must make a sustained commitment to meet as a group on a regular basis throughout the calendar year to provide assistance with planning and implementing local outreach activities focused on addressing long-standing health disparities in the community.

References

Health Management Associates. (2021). 6 Ways to Reduce Health Inequities during the COVID-19 Pandemic. https://leavittpartners.com/6-ways-to-reduce-health-inequities-during-the-covid-19-pandemic/

Jones, J. H., & Reverby, S. M. (2022). 50 Years After the Tuskegee Revelations: Why Does the Mistrust Linger? *American Journal of Public Health, 112*(11), 1538–1540. https://doi.org/10.2105/ajph.2022.307088

Khan, F. A. (2011). The Immortal Life of Henrietta Lacks. *The Journal of IMA, 43*(2), 93–94. https://doi.org/10.5915/43-2-8609

Magesh, S., John, D., Li, WT., Li, Y., Mattingly-app, A., Jain, S., Chang, E., & Ongkeko, W. (2021). Disparities in COVID-19 Outcomes by Race, Ethnicity, and Socioeconomic Status: A Systematic Review and Meta-analysis. *The Journal of the American Medical Association Network Open, 4*(11), e2134147. https://doi:10.1001/jamanetworkopen.2021 .34147

National Conference of State Legislatures. (2021). Health Disparities Overview. https://www.ncsl.org/research/health/health-disparities-overview.aspx

Office of Disease Prevention and Health Promotion. (n.d.). Health Equity in Healthy People 2030. U.S. Department of Health and Human Services. https://health.gov/healthypeople/priority-areas/health-equity-healthy-people-2030

Organisation for Economic Co-operation and Development. (2020). Transparency, Communication and Trust: The role of public communication in responding to the wave of disinformation about the new coronavirus. https://www.oecd.org/coronavirus/policy-responses/transparency-communication-and-trust-the-role-of-public-communication-in-responding-to-the-wave-of-disinformation-about-the-new-coronavirus-bef7ad6e/

Rubin-Miller, L., Alban, C., Artiga, S., & Sullivan, S. (2020). COVID-19 racial disparities in testing, infection, hospitalization, and death: analysis of Epic data. https://www.kff.org/coronavirus-covid-19/issue-brief/covid-19- racial-disparities-testing-infection-hospitalization-death-analysis-epic-patient-data

Weiss, B. D., & Paasche-Orlow, M. K. (2020). Disparities in Adherence to COVID-19 Public Health Recommendations. Health literacy research and practice, 4(3), e171–e173. https://doi.org/10.3928/24748307-20200723-01

Wilson, V. (2020). Inequities exposed: How COVID-19 widened racial inequities in education, health, and the workforce. https://www.epi.org/publication/covid-19-inequities-wilson-testimony/

Yek, C., Warner, S., Wiltz, J., Sun, J., Adjei, S., Mancera, A., Silk, B., Gundlapalli, A., Harris, A., Boehmer, T., & Kadri, S. (2022, January 7). Risk Factors for Severe COVID-19 Outcomes Among Persons Aged ≥18 Years Who Completed a Primary COVID-19 Vaccination Series — 465 Health Care Facilities, United States, December 2020–October 2021. *Morbidity and Mortality Weekly Report; 71*:19–25. DOI: http://dx.doi.org/10.15585/mmwr.mm7101a4external icon

COVID-19 Vaccines: Perception and Reality

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The opinions expressed herein are those of the author alone and do not represent the views of any agency the author serves. The author has no conflicts of interest.

Abstract

The COVID-19 pandemic erupted in early 2020. Vaccine is so far, the best weapon available to combat SARS-CoV-2. However, many elements, including public perception and seemingly contradictory scientific results, have influenced vaccination acceptance. This article aims to depict what is known about vaccines from a scientific perspective, as well as provide an overview of the public perception and acceptance of the vaccines. Different types of vaccines will be explored, and their benefits and side effects described. COVID-19 has evolved through multiple mutations, thereby giving birth to new variants that have spread worldwide, caused differing symptoms and, in some cases, escaping from vaccine protection. A comparison of differing vaccine efficacy will also be discussed. In addition, differences in perceptions between the population in Europe and United States regarding vaccines will be explored.

Keywords: SARS-CoV-2, COVID-19, vaccines, perception, variants, adverse reactions, thrombosis, myocarditis/pericarditis

Introduction: COVID-19 Vaccines and Public Perceptions

SARS-CoV-2, also known as COVID-19, was first detected in December 2019. After three years, over 753 million confirmed cases and over 6.8 million deaths reported globally (WHO, 2023), and many research and clinical trials later, the best way to be protected from the virus is through vaccination. The vaccination program started in early 2021 worldwide, initially targeting healthcare workers, followed by the rest of the population starting with those of age and high risk. Vaccines, which started with Edward Jenner, who developed the smallpox vaccine in 1796 (Ellis, 2021), provide active acquired immunity by stimulating an immune response to an antigen from the pathogen (Sell, 2019), while provide protection through herd immunity to those unvaccinated (Chu & Liu, 2021; Motta, 2021).

The race to get COVID-19 vaccines, in which many pharmaceutical companies participated, was productive, and currently there are several effective vaccines available, using different technology such as inactivated virus, messenger ribonucleic acid (mRNA), protein subunit, and vector vaccines (Kaur & Gupta, 2020). Some of the COVID-19 vaccines available in the market include Pfizer, Moderna, AstraZeneca, Johnson & Johnson, and Sinovac, among others. COVID-19 vaccine names can be confusing; see end note 1. A mixture of accurate information and misinformation led to particular vaccine preferences by the population, and in some cases led to rejection of certain vaccines. Studies have addressed possible COVID-19 treatments, and while there seem to be some potential candidates, vaccines seem to hold the key to ending the pandemic in the near future.

However, one of the difficulties in managing the pandemic is the constantly emerging variants that escape the vaccines and are responsible for the fluctuating incidence of the disease. As a result, continuous research is required to address this issue and improve the existent vaccines to protect against the new mutations.

According to the European Centre for Disease Prevention and Control (ECDC, 2023), at the end of January 2023 in EU, the distribution and predominant variant in Europe -by genotype sequencing- is estimated to be 48.5% for BQ.1, 20.2% for BA.2.75, 17.6% for BA.5, 4.2% for XBB.1.5, 3.6% for XBB.1.1, 1% for BA.2 and 0.2%–1% for BA.4. Viral variant names can be confusing; see end note 2.

In early 2023 in the USA, there is a 12% positivity rate with more than 46,000 cases reported daily; currently, the omicron variants have replaced previous variations, and XBB.1.5 is the dominant variant nationwide with 49% of cases and rapidly spreading according to the Centers for Disease Control and Prevention (CDC, 2023; ECDC, 2022). Before Christmas, this variant accounted for 21.7% of COVID-19 cases, followed by BQ.1.1, with 27% of cases. XBB.1.5 is a hybrid of the BA.2 and the new XBB variant that surged in Singapore in the autumn 2022 and has replaced other subvariant including BA.5 and BF.7.

It has been recently suggested by Borau et al., (2022) that public authorities should have shifted the focus away from protecting the most vulnerable towards a less sensitive demographic such as single men because of the higher vulnerability of this population in following protective measures such as social distancing and mask wearing. Yet, married people in general were more careful in terms of contagion and propagation of the disease, which could be linked to a stronger sense of social belonging and morality. This is an important element in places where COVID-19 is still highly active and could be key to stopping the surge of new variants.

One of the aspects that distinguishes this pandemic from any previous disease is the polarizing effect of politics, which is greater in the United States than in Europe. COVID-19 skepticism and anti-vaccine advocates may reflect current socio-economic and political culture.

So why, despite the known scientific data, have governments failed to sell vaccines to the public? It can be argued that public distrust in the vaccine is associated with the lack of coherence in the story and recommendations presented by government spokesmen. In the U.S. Dr. Anthony Fauci has been extensively criticized. Concealment of information about vaccine side effects by government agencies such as CDC or FDA has also eroded public confidence (CNN Health, 2023). In defense, it can be argued that everyone was catching up after COVID-19. Even scientists were learning "on the go," and recommendations needed to be adapted and changed according to new discoveries. It is more difficult to justify concealment of information by government agencies about what they knew about the vaccines and their possible negative side effects. In addition, the public perception that big biotechnological companies are the great beneficiaries of COVID-19 and the accusations of possible benefit for the members of the scientific community further eroded public trust. The highly publicized association of European Commission President Ursula von der Leyen's personal connections with Pfizer (The Guardian, 2022) and her possible conflict of interest has been criticized for the high prices negotiated for the acquisition of mRNA Covid vaccines.

It can also be argued that government paternalism, people's feeling of losing their autonomy as individuals, and the view of being controlled by the government without a clear explanation are important factors. The direction from the scientific community was sometimes perceived as incoherent and may have played a role in the rejection of vaccines. The simplistic confidence in social media and the messages and opinions portrayed there, not always based on truth or science, contributed to fuelling public perceptions and questioning the efficacy and benefit, or even the real need, for vaccines.

COVID-19 Vaccines: What is New?

Until COVID-19 surged, traditional vaccines were the only ones in use. COVID-19 made possible the use of new technology that was already available but had not yet been tested in vaccines. A controversial argument and point of misinformation among the population is the belief that a vaccine that took less than a year to develop cannot provide the same guarantee as vaccines whose approval can take up to 10 years. However, the explanation is simple: unlike the vectors that require very laborious work, the mRNA vaccine technology allows a direct target for activation of the immune system because it introduces the exact coding for the pathogen protein. Another point of polemic is the belief that mRNA vaccines introduce the viral genome and can cause mutations in DNA. This, of course, is not true. Not more than when a viral vector or the virus itself is inserted.

So far, there are several COVID-19 vaccines already approved and in use in the general population, and many more are under study as possible candidates. However, they all fit in one of these four categories: 1) whole virus, 2) protein-based, 3) viral vector, and 4) nucleic acid vaccines. And for the first time, mRNA vaccines against SARS-CoV-2 have been approved for emergency use (WHO, 2021).

Whole virus vaccines use an inactivated or attenuated form of SARS-CoV-2, whose genetic material has been damaged so is not able to infect cells or cause disease, but still able to replicate, to trigger immunity (Gao et al., 2020). Some existing examples include the traditional vaccines against measles, oral poliovirus, and yellow fever vaccines with attenuated virus, or the inactivated polio and seasonal influenza vaccines (Rodrigues et al., 2015).

Although they can trigger strong cellular immunity (Frederiksen et al., 2020), the disadvantage of live-attenuated SARS-CoV-2 vaccines include the risk of infection to unvaccinated individuals and the risk of viral recombination generating new viral variants. Additionally, this type of vaccine requires strict quality controls, and the large-scale production can be stalled.

Protein-based vaccines involve easy to produce recombinant proteins of viral antigen fragments (Hsieh et al., 2020). They are relatively safe, but they have the limitation of producing low immunogenicity, so they usually require adjuvants. Examples of this type of vaccine include vaccines against whooping cough, *Streptococcus pneumoniae*, and *Haemophilus influenzae* type b (Nagy & Alhatlani, 2021).

Some of the candidates for protein-based SARS-CoV-2 vaccines use empty virus shells that induce immunogenicity but cannot infect cells because they lack genetic material (Callaway, 2020). Human papillomavirus vaccine is an example of these vaccines (Mavundza, et al., 2020).

Viral vector vaccines, also called *chimeric virus vaccines*, are based on the survival and replication of the virus that invades their host's cells and makes new viruses (Chen & Li, 2020). The replication-defective adenovirus-vectored vaccines use the adenovirus double-stranded DNA to infect cells and express the SARS-CoV-2 viral spike S antigens; these antigens can then trigger an immune response safely (Chen & Li, 2020, Rauch et al., 2018). The virus inserted is weakened, so it can induce immunity but not cause disease, such as the case of adenovirus, measles virus, and vaccinia virus (VACV), or Ebola virus disease (Tomori & Kolawole, 2021). Regulatory authorities have approved various viral vectors for SARS-CoV-2 as candidate vaccines for emergency use (WHO, 2021).

Nucleic acid vaccines are relatively new and used for the first time with SARS-CoV-2. They use deoxyribonucleic acid (DNA) or ribonucleic acid (RNA) to produce a SARS-CoV-2 protein that induces an immune response. In the case of DNA vaccines, DNA encoding the antigen is inserted in a circular plasmid, widely used in genetic engineering. The host cell can then translate it into proteins (Rauch et al., 2018). In the case of RNA vaccines, the antigen is encoded in a nucleoside-modified messenger RNA (mRNA) that will be transcribed into proteins (Frederiksen et al., 2020; Rauch et al., 2018). The mRNA vaccines therefore contain a mRNA encoding the viral spike S glycoprotein of SARS-CoV-2, lipid nanoparticles, salts, sugars, and buffers (FDA, 2020a, 2021b). In any case, once the antigen proteins have been produced by the cell, they are displayed in the surface and recognized by the immune system, triggering a response by T cells and B cells (Rodrigues, 2015).

mRNA Vaccines Against SARS-CoV-2

Between December 2020 and January 2021, the Food and Drug Administration (FDA) United States (US) and the European Medicines Agency (EMA) dispensed Emergency Use Authorizations for the mRNA Pfizer-BioNTech and Moderna COVID-19 vaccines (FDA, 2020b, 2020c, 2021a). Two vectorised vaccines, Janssen COVID19 –a replication-defective human adenovirus type 26 (Ad26) (Ad26.COV2-S) (EMA, 2021a)– and COVID-19 AstraZeneca vaccine (re-branded as Vaxzevria) in the European Union (EU) –a replication-defective chimpanzee adenovirus (ChAdOx1-S)– have also received Emergency Use Authorizations. All SARS-CoV-2 vaccines currently approved are based on the different sequences of the spike S glycoprotein of SARS-CoV-2, which plays essential roles in virus attachment, fusion, and entry into the host cell.

So far, phase 3 clinical trials for the main mRNA COVID-19 vaccines –BNT162b2 (Pfizer-BioNTech) (Polack et al., 2020) and mRNA-1273 (National Institute of Allergy and

Infectious Diseases [NIAID]-Moderna) (Baden et al., 2021) – have proven a safety profile and high efficacy against severe disease. Other clinical trials in phase 3 of COVID-19 vaccines include a non-replicating chimpanzee adenoviral vector vaccine (ChAdOx1 nCOV19; Oxford-AstraZeneca), a non-replicating adenovirus 26 vector vaccine (Ad26COV2S; Janssen), and an adjuvanted prefusion spike nanoparticle vaccine (NVX-CoV2373; Novavax) with different efficacy (Rapaka et al., 2022).

Both mRNA COVID-19 vaccine –Pfizer-BioNTech and Moderna– encode the spike protein of SARSCoV-2 but differ in the mRNA content –100 µg for Moderna vs. 30 µg for Pfizer-BioNTech– and the lipid composition of the nanoparticles, as well as the different time for boosts (Polack et al., 2020; Baden et al., 2021). These differences may account for the discrepancies in antibody response between both vaccines and may be translated into different vaccines' outcome, which in both cases reaches more than 90% efficacy for both mRNA vaccines against COVID-19 (Dickerman et al., 2022). Early randomized trials showed 95% effectiveness for BNT162b2 (Pfizer-BioNTech) and 94% for mRNA-1273 (Moderna) (Polack et al., 2020; Baden et al., 2021) demonstrating that messenger RNA (mRNA) based vaccines have a strong efficacy in prevention of symptomatic COVID-19, with similar levels of efficacy in the vaccination campaigns (Dagan et al., 2021).

The mode of action of both type of vaccines against SARS-CoV-2 is slightly different. mRNA vaccines induce the immune response due to the activation of antigen-presenting cells after the cellular internalization of the lipid nanoparticles containing the mRNA encoding the spike S glycoprotein of SARS-CoV-2 and the production of immunoglobulin antibodies against the spike S protein (Granados-Riveron & Aquino-Jarquin, 2021). Chimeric virus vaccines, on the other hand, base their mode of action on the ability of the chimeric adenovirus to infect human cells and induce the expression of the S spike protein and the development of antibodies against this S spike protein via antigen-presenting cells as a result.

SARS-CoV-2 Variants

Viruses are constantly evolving and changing because every time a virus replicates, there is the potential for structural changes or mutations that generate variants of the original virus. Some mutations are innocuous, but others can affect its ability to infect or replicate and increase its ability to spread or cause more severe illnesses. This is the case of the highly mutable virus of SARS-CoV-2, which has already produced a significant number of variants from the beginning of the pandemic including Alpha, Beta, Delta, Gamma, Epsilon, and Omicron so far (WHO, 2023).

The rapid predominance of highly transmissible Gamma variant P.1 with three mutations in the spike glycoprotein (Faria et al., 2021), originated in Brazil; it had an initial prevalence of 45% in February 2021 but rapidly reached 98% in subsequent months; it has been associated with a greater frequency of deep vein thrombosis (DVT) (Hungaro Cuhna et al., 2022).

The Delta variant, responsible for many cases and deaths worldwide, developed into the dominant variant globally as mutations allowed it to spread more easily than earlier strains of the virus. Luckily, according to WHO (2023), all approved COVID-19 vaccines are effective in preventing severe disease and death against this variant.

Omicron variants B.1.351, with increased transmissibility (Rapaka et al., 2022), and B.1.1.529, with many mutations that have caused detrimental changes in COVID-19 pathology and immunology (WHO, 2023), were first discovered in South Africa and have been identified in the United States. The Omicron subvariant of COVID-19, BA.5, became one of the dominant strains of the virus in the fall of 2022 in the U.S; it seems able to evade immunity from COVID infection and vaccination. Currently, the dominant variant nationwide is Omicron XBB.1.5, with 49% of cases, followed by BQ. The B.1.1.7 variant, associated with increased spread and virulence (Horby et al., 2021), first identified in the United Kingdom (Rambaut et al., 2020), is quickly spreading throughout the U.S. The Omicron variant quickly mutated into other sub lineages, from BA.1/BA.2 to BA.4/5 (Khan et al., 2022; Lyngse et al., 2022) and can evade vaccine and infection-induced immunity due to the large number of mutations; BA.2.75, BQ.1, and XXB are currently circulating.

Because of these viral mutations, vaccines have a different effect on different strains and variants, and symptoms also change ranging from the classic loss of taste and smell, high fever and fatigue, to new symptoms with the latest Omicron variant XBB.1.5 and BF.7, including muscle pain, headache, sore throat, and nasal congestion (ECDC, 2022).

Currently, there are 14 authorized COVID-19 vaccines: BNT16b2, mRNA-1273, AZD1222, Ad26.COV2.S, Sputnik V, NVX-CoV2373, Ad5-nCoV, CoronaVac, BBIBP-CorV, COVAXIN, Wuhan Sinopharm vaccine, QazCovid-In, Abdala and ZF200, with two vaccines, CVnCoV and NVX-CoV2373, in review. These vaccines have different efficacy against different variants. BNT162b2, mRNA-1273 and Sputnik V had the highest efficacy (>90%) in phase III trials. Efficacy ranged from 10.4% for AZD1222 to 50% for NVX-CoV2373 in South Africa and 50 % for CoronaVac in Brazil, where the 501YV.2 and P1 variants were dominant (Dejnirattisai et al., 2021; Faria et al., 2021). In observational studies, mostly with Pfizer and Moderna vaccines, mRNA vaccines are effective in prevents SARS -CoV-2 infection against the Alpha and Beta variants.

Typical and Less Common Reactions to COVID-19 Vaccines

COVID-19 vaccines are generally safe and well-tolerated. However, some of the common adverse reactions include local skin reactions, numbness, soreness, pain, swelling, redness, itch, and erythema at the injection site; systemic reactions include sore throat, tiredness, fever, chills, sweating, cough, headache, malaise, muscle pain, joint pain, pain in limbs, abdominal pain, diarrhea, drowsiness, nausea, vomiting, poor appetite, insomnia, or feeling unwell.

Less common reactions observed include enlarged lymph nodes, rash, temporary one-sided facial drooping, and severe allergic reactions including hypotension, dizziness, itchy skin rash, swelling of face or tongue, and wheezing or shortness of breath. Besides the common or even less-common reactions, anaphylaxis and myocarditis have been observed.

Public Perceptions on Vaccines in EU and USA

COVID-19 pandemic has spread globally and has infected millions of people with hundreds of thousands of deaths (Malik, 2020). Governments all over the world have prioritized a message supporting the vaccine acceptance, with special emphasis in the vulnerable population, including not only people with underlying conditions but also low-income neighborhoods and communities of color (Yancy, 2020). Lockdown, restrictions, bans on travel, and massive testing and contact tracing are some of the policies initially put in place before vaccines were available.

Despite the overall positive support towards vaccines and the increase in the American population vaccinated, social media data have exposed that a negative sentiment still exists amongst those who are vaccine hesitant (Ali et al., 2021). Between 10% to 40% of people in the U.S. are COVID-19 vaccine hesitant, a percentage that can be predicted with high accuracy according to demographic traits. The success of COVID-19 vaccines depends on the public acceptance over misinformation, hesitancy, and fears of negative side effects (Karlsson et al., 2021; Schwarzinger et al., 2021). Social media such as Twitter, Facebook, etc., play an important role in shifting public opinion regarding vaccines.

Large number of adults are hesitant to take the vaccine, which may be detrimental to obtaining herd immunity induced by vaccination. Initial research indicated that herd immunity could be achieved in the U.S. if between 58 and 85% adults were fully vaccinated with a 95% vaccination efficacy. Two mRNA vaccines, Pfizer-BioNTech and Moderna have shown 95% (Polack et al., 2020) and 94.1% (Baden et al., 2021) efficacy, respectively, in clinical trials. However, with an estimate that vaccinations can only reduce 75% of transmissions, in order to achieve herd immunity, a larger percentage of the population –between 78 and 94%– would need to be vaccinated (Ali et al., 2021).

Approximately 22% of people with low education levels and income (Khubchandani et al., 2021), and 23% of medical students in the U.S. (Lucia et al., 2021) were hesitant to be vaccinated after the FDA approval; the willingness to receive a vaccine amongst U.S. population increased with the efficacy results and approval from CDC and WHO (Kreps et al., 2020), which substantiate the vaccine hesitancy among people in the U.S. (McCabe et al., 2021). However, this willingness was significantly reduced when the vaccine was from outside U.S., and even more so if it came from China.

A study noted that the demographic characteristics of people with a more positive view of the vaccines and more inclined to receive it included married men, white and non-Hispanic people, college graduates, Democrats, people with underlying conditions, health care workers, and those who took the influenza vaccination in the same year. Viewers from CNN/MSNBC also were more inclined to get vaccinated (76.4%) than Fox News viewers (57.3%), reflecting how the polarization of vaccines was linked to politics (Ruiz & Bell, 2021). On the other hand, female, younger generation, Black/Hispanic Americans, low educational and socio-economic background, unemployment, anti-vaccine attitudes, and religiousness were negatively associated with an inclination to accept the vaccine.

Research in France revealed that almost 25% of people refused to be vaccinated, and the main reason for distrusting the vaccine –64% of participants– was their belief that the vaccines were developed in a rush and were unsafe (Ward et al., 2020). The research also pointed out that people ideologically close to the government had a more positive view of the vaccines. Similar results in other study suggested that three in four people were certain or probable to undergo vaccination (Detoc et al., 2020).

In a review about COVID-19 vaccination acceptance across several countries, Troiano & Nardi (2021) found that safety concerns and the rush in the vaccine production, lack of trust or doubts about its efficacy, and ultimately lack of vaccine availability, were responsible for the acceptance or non-acceptance by the population.

Differences in non-acceptance of the COVID-19 vaccine in European countries ranged from 6.4% of adults in Spain to 61.8% in Bulgaria. Conditional benefits of being vaccinated increased the willingness in Germany and the UK (Steinert et al., 2022), as well as the trust in government and higher education in most European countries. The type of vaccine also influences hesitance rate in EU, with a high acceptance for BioNTech/Pfizer and Moderna mRNA vaccine, and more contradictory support for AstraZeneca –highly trusted by UK participants compared with 5% in Germany or Italy (Reno et al., 2021; Freeman et al., 2021; Soares et al., 2021). In a wider study in 2022 of vaccine hesitancy among 23,000 respondents in 23 countries worldwide (Lazarus et al., 2022), the favorable opinion about vaccination increased to 79.1% but one in eight (12.1%) vaccinated people are hesitant about booster doses. However, vaccine hesitation increased in eight countries ranging from 1% in United Kingdom to 21.1% in South Africa. Lower education, mistrust in science and governments (Shakeel et al., 2022), and misinformation (Pierri et al., 2022) drive vaccine hesitancy.

Comparison of Efficacy Among Different Vaccines

COVID-19 infections have a wide range of clinical manifestations, from asymptomatic to severe, mostly due to the different variants and the individual's response to the infection. As was explained in previous sections, COVID-19 vaccines administered include inactivated whole virus, lipid nanoparticle-encapsulated mRNA, adenovirus-vectored and protein sub-unit vaccines.

Despite the number of vaccines available at the moment, due to the simplicity of using synthetic nucleic-acid and the easy production process, mRNA COVID-19 vaccines manufactured by Pfizer-BioNTech (BNT162b2) and Moderna (mRNA-1273) were the first on the market and the ones that obtained Emergency Use Authorization by the FDA in early December 2020. They both have shown high efficacy against infection and hospitalization in randomized controlled trials and observational studies (Polack et al., 2020; Baden et al., 2021) against the very dangerous Alpha and Delta SARS-CoV-2 variants (Ioannou et al., 2022); less is known about their efficacy against Omicron variant. Pfizer-BioNTech and Moderna vaccines both include full-length Spike protein-encoding mRNAs but use different content, intervals between doses and composition of the lipids nanoparticles vehicles.

The data suggest that Moderna may elicit greater immune responses than Pfizer-BioNTech, because it maintains better vaccine efficacy levels over time and is slightly more effective against infection and hospitalization (Dickerman et al., 2022), although both offer very similar protection (95% and 94.1%, respectively) (Polack et al., 2020; Baden et al., 2021; Dagan et al., 2021). Novavax (NVX-CoV2373), a recombinant S-protein vaccine, gave 89.7% protection against SARS-CoV-2 infection (Heath et al., 2021). Viral-vector vaccines Sputnik (Gam-COVID-Vac), Janssen (Ad26.COV2.S), and AstraZeneca (ChAdOx1), were all effective in protection against symptomatic COVID-19 (91.6%, 66.9%, and 66.7%, respectively; Voysey et al., 2021; Sadoff et al., 2021).

CoronaVac (Sinovac) vaccine has recently been approved for emergency use by the World Health Organization. Phase I/II and phase III clinical trials studies comparing post-vaccination adverse reactions between CoronaVac and Comirnaty (Pfizer-BioNTech) (Lai et al., 2022) showed a positive safety profile in phase I/II and phase III clinical trials (Tanriover et al., 2021; Zhang et al., 2021) and efficacy against COVID-19. CoronaVac and mRNA vaccines are developed on a different platform and more widely used in Western countries (Chodick et al., 2021).

A comparison of vaccines among the population indicates a clear preference for the Pfizer mRNA vaccine with 95% efficacy and having 1% side effects; the least preferred was Sinovac with 50.4% efficacy and 50% side effects. Pfizer and Moderna had the highest efficacy rates of 95% and 94.7%, respectively (Katella, 2021); AstraZeneca had an efficacy rate of 70%, Johnsons and Johnsons with 72%, and Sinovac oscillated between 50.38% and 91.25% in different clinical trials (Terry, 2021).

Other vaccines are in use or in process of development. Chinese companies Sinopharm and CanSinoBIO are currently developing vaccines. Sinopharm is producing two different jabs based on an inactivated form of SARS-CoV-2, while CanSinoBIO –like the Russia's Sputnik V vaccine– uses a human adenovirus, Ad5, to deliver SARS-CoV-2 proteins. CoronaVac, created by the Chinese company Sinovac, is also based on an inactivated form of SARS-CoV-2 (Baraniuk, 2021), and results seems to indicate that is generally safe and well tolerated, with few adverse effects. Zifivax, a protein subunit vaccine developed by Anhui Zhifei Longcom, requires three doses and uses proteins based on the receptor binding domain of the SARS-CoV-2 virus. The Spike Ferritin Nanoparticle COVID-19 vaccine (SPFN_1B-06-PL) is a SARS-CoV-2 spike fused to *H. pylori* ferritin nanoparticle vaccine candidate developed internally at the Walter Reed Army Institute of Research (Joyce et al., 2021) and is currently being tested in a clinical trial.

CoronaVac efficacy differs in several trials but ranges from 86% efficacy reported by the United Arab Emirates to 91.25% in Turkey and 78% effective in Brazil at preventing mild cases according to a phase III trial involving 12,000 healthcare workers, suggesting that the vaccine was only 50.4% effective against symptomatic COVID-19, and 65% effective in very mild cases in Indonesia (Baraniuk, 2021). CanSinoBIO's one dose jab was found to be 75% effective in Pakistan, and is currently being tested in Argentina, Chile, Mexico, and Russia (Baraniuk, 2021). T-cell immune responses occur after natural infection and correlate with reduced disease severity and reduced viral loads (Rodda et al., 2021; Rydyznski Moderbacher et al., 2020; Tan et al., 2021). Comparison of the humoral and cellular responses to Comirnaty (Pfizer-BioNTech) and CoronaVac (Sinovac) showed that Pfizer induces stronger humoral responses; nevertheless, CoronaVac induces higher CD4+ and CD8+ T-cell responses to the structural protein (Mok et al., 2022).

AstraZeneca (ChAdOx1 nCOV19) vaccine efficacy from Brazil and the United Kingdom trials reach 70.4% efficacy against symptomatic COVID-19, with 66% in moderate-to-severe disease, ranging from 64% in South Africa to 72% in the United States. However, the efficacy against severe disease, hospital admission, or death was 85%. Meanwhile, Pfizer-BioNTech and Moderna, the two mRNA vaccines authorized for use in the United States, were approximately 87% effective for preventing COVID-19 hospitalizations and near 100% protection against severe COVID-19 (Braden et al., 2021; Dragan et al., 2021).

Rare Adverse Effects of COVID-19 Vaccines

Since COVID-19 vaccines have been in use in the European Union and the United States after December 2020, adverse reaction caused by the main vaccines –manufactured by AstraZeneca, Janssen, Moderna, and Pfizer-BioNTech– have been reported, and EMA and FDA have recognized so far about 30 to 40 types of adverse reaction. The negative effects associated to COVID-19 vaccine encompass allergic, dermatological, gastrointestinal, and neurological reactions; localized and non-localized pain; lymphadenopathy, arthralgia, myalgia, arrhythmia, and cardiovascular events, including myocardial infarction, cardiac or respiratory arrest, neurosensory disruptions, cerebrovascular accidents, hemorrhages, coagulopathy, pulmonary dysfunction, and thrombosis, myocarditis, and pericarditis (EMA, 2021b, 2021c).

Overall, although not statistically significant, there seems to be a slight increase in the number of adverse reports of females associated with Oxford-AstraZenaca (50.6%) and Pfizer (53.2%) vaccines, while the Moderna vaccine has more reports linked to males.

Branda & Tosi (2022) did a comparative analysis of the adverse effects and the influence of age and sex in the four most well-known vaccines. Results showed 43% of the serious adverse events occurred in the Comirnaty vaccine (Pfizer/BioNTech), 72% in women and 27% in men. Spikevax (Moderna) accounted for 49% of the serious effects, 69% of them in women and 30% in men. The most reported adverse events with Vaxzevria (AstraZeneca) refer to general disorders and administration site conditions (26%), followed by nervous system disorders (21%), and musculoskeletal and connective tissue disorders (15%); 71% of them were related to women and 27% to men, while 58% of reports involve women and 41% men with Janssen (Janssen-Cilag). Adverse events matched the results presented in all vaccination, and most of the notifications involve generalized disorders and administration site conditions (25%), followed by nervous system disorders (from 17% to 21%), musculoskeletal and connective tissue disorders (12% to 15%), and gastrointestinal disorders (8%) as the main side effects.

EudraVigilance –the system for managing and analyzing information about suspected adverse reactions to medicines– and VAERS –the CDC and FDA's Vaccine Adverse Event Reporting System– showed that the risk estimates of adverse reactions by vaccine type were larger for the Pfizer-BioNTech vaccine, followed by AstraZeneca and Moderna. The Janssen vaccine presented lower risk in both databases. However, the mRNA and vectorized vaccines displayed comparable risk estimates of deaths, hospitalizations, and life-threatening reactions (Montano, 2022). The incidence of those acute life-threatening conditions seemed to be more frequent among individuals aged 65 years and older and happened, for the major part, within the first seven days post-vaccination.

Among the most serious and very rare adverse event linked to COVID-19 vaccines, anaphylaxis and myocarditis have been described after mRNA vaccination; thrombosis with thrombocytopenia syndrome after Janssen and AstraZeneca vaccines, and neurological Guillain-Barre syndrome after Janssen vaccine have also been reported.

Occasional cases of Stevens-Johnson syndrome (SJS) or toxic epidermal necrolysis (TEN) –severe cutaneous adverse reactions– related to COVID-19 vaccination have been reported after the Moderna vaccine in the United States (Elboraey et al., 2021; Dash et al., 2021); and a case of erythema multiforme (EM) in an elderly patient after receiving the BNT162b2 mRNA COVID-19 vaccination in Germany was also recorded (Gambichler et al., 2021).

Recent studies have also reported possible associations between mRNA COVID-19 vaccines –higher with mRNA-1273 compared to BNT162b2– and the risk of myo-pericardial inflammation. The majority of myopericarditis developed after the second dose of the vaccine, particularly among younger males, has been shown in several studies including those from Hong Kong (Chou et al., 2022), France, and Canada (Abraham et al., 2022).

Widespread vaccination with adenoviral vector vaccines against COVID-19 raised different safety concerns. A few rare cases of cerebral vein thrombosis (CVT) associated with thrombocytopenia have been observed after the first dose of the adenoviral vector vaccines CHADOX1 NCOV-19 (Vaxzevria; AstraZeneca) and AD26.COV2.S (Janssen; Johnson & Johnson) (Schultz et al., 2021; See et al., 2021). Blood clots and thrombocytopenia are very rare side effects. The thrombotic adverse drug reactions were more prevalent among the age group 65 and younger, with a 55% prevalence in females; and a lower rate of unusual site thrombosis was observed for the mRNA vaccines (3–5%) compared to the adenoviral vaccines (31–44%) (Abbattista et al., 2021).

In March 2021, some concerns were raised about an increased risk of thrombosis associated with thrombocytopenia in people who had received the AstraZeneca and Jenssen vaccines. These patients exhibited thrombosis at unusual sites, thrombocytopenia, elevated d-dimer levels, and reduced fibrinogen levels (Greinacher et al., 2021; Scully et al., 2021). Even more strange, most of them were fit and healthy young people, mainly women (Greinacher et al., 2021). In these cases, cerebral venous thromboses and ischemic stroke dominated the clinical presentation. Other pathological events included deep veins thrombosis in legs and pulmonary embolism. Portal- and splanchnic-vein thrombosis, cardiac or cerebral arterial events, with myocardial infarctions and cerebrovascular accidents, were also common in people younger than 50 years of age (Simpson et al., 2021). The high mortality (22%) associated with Vaccine-induced immune thrombocytopenia and thrombosis was highest among patients with a low platelet count and intracranial hemorrhage, and especially those with cerebral venous sinus thrombosis (Pavord, 2021).

Another study identified deep venous thromboses (DVTs) and pulmonary embolism associated with the Moderna and Pfizer vaccines in the same study period (EMA, 2021d). A substantial difference, however, was the age of the subjects. Thus, while the majority of thrombotic adverse events linked to the Oxford-AstraZeneca vaccine were reported in the age group 18–64 years (53.8%), these events reported for Moderna (48.2%) and Pfizer vaccines (47.3%) took place in the older age group of 65–84 years (Tobaiqy et al., 2021).

Although these are serious side effects, it is worth mentioning that they are very rare (between 2 and 8 cases per million doses), and therefore, all health agencies worldwide agree that COVID-19 vaccine benefits outweigh risks.

Potential Pathophysiological Mechanisms of Adverse Reactions

One of the main concerns about COVID-19 vaccines is the lack of data in prophylactic vaccination, particularly from the use of nucleic-acid-based technology (Feldman et al., 2019). There is, however, enough research and information to allow the identification of three pathophysiological pathways of COVID-19 vaccines leading to adverse reactions.

1st pathway

COVID-19 vaccines based on nucleic acid technology cause a strong immune response via Toll-like receptors (TLR) and involve many inflammatory mediators, including interleukins (IL) IL-6, IL-12, interferon type 1 (IFN-1), and tumor necrosis factor α (TNFα), and processes like maturation of dendritic cells, or induction of CD4+ and CD8+ T cell responses, among others (Vallazza et al., 2015; Ritter et al., 2002; Kramps & Probst, 2013; Polard et al., 2013). These strong immune reactions linked to COVID-19 seems to be age-dependent associated with degenerations of hemodynamic and cardiovascular structures (Ageno et al., 2008; Aujesky et al., 2005) and may increase the risks of pathophysiological mechanisms related to tissue damage and thromboembolic events (Lazaros et al., 2021).

Results from clinical trials indicate that adenovirus proteins from the adenovirus-vector technology, provoke an acute-phase immune responses involving IL-6 and TNFα and activation of innate immunity cells –mast cells and neutrophils– (Ritter et al., 2002). The cytokine cascade activation can lead to an acute shock-syndrome, which can induce acute respiratory distress, alter the intravascular coagulation and cause multiorgan failure (Lazaros et al., 2021). Thus, pro-inflammatory environments related to TNFα, matured dendritic cells and the receptors TLR3 and TLR7 has been associated with progression of autoimmune diseases such as lupus erythematosus and rheumatoid arthritis (Kim et al., 2015; Thibault et al., 2009).

2nd pathway

The second pathway involves the known spike S pathogenicity of the of SARS-CoV-2 which has been implicated in the endotheliopathy and coagulopathy observed in severe COVID-19 cases. The spike S protein is a strong activator of the alternative pathway of complement which may contribute to the endothelial damage observed in COVID-19 patients (Yu et al., 2020), and enhance aggregation of platelet and formation of thrombus (Zhang et al., 2020), or cross the blood-brain barrier and is taken up by the neural cells, the lung, liver, kidney, and spleen (Rhea et al., 2020). The spike protein can also cross other types of blood endothelial barriers like the spinal cord, ovaries, testes, and eyes, and can induce innate immune responses. This pathophysiological pathway involving transduction across blood barriers and immune response could explain some of the neurological and inflammatory reactions.

3rd pathway

A final pathway for the pathogenicity of mRNA vaccines involves possible anaphylactic reactions by complement activation and enhanced platelet aggregation (Verhoef et al., 2014) due to lipid nanoparticles used to deliver the synthetic mRNA, which prevents the metabolization of the nucleic-acid and increase the blood and plasma concentrations (Christensen et al., 2014). This effect may contribute to the pro-inflammatory responses and the increased risks of thromboembolic or anaphylactoid outcomes. Reactions of this type, including pulmonary embolism, thrombosis, cerebral hemorrhage, myocardial infarction, or cerebral venous sinus thrombosis have been reported in autopsies and identified as mechanisms involved in COVID-19 vaccines negative outcomes.

The increased risk in population over 65 years old may be related to age-dependent alterations in biological structures and functions such as the increase of pro-inflammatory cytokines (Franceschi et al., 2007) and clotting factors in serum (Mari et al., 2008), not to mention the increased cardiovascular and cerebrovascular risk due to pathogenic alterations of the vasculature (Ungvari et al., 2018). All these elements may influence the negative outcomes of COVID-19 vaccines in some cases.

Conclusion

This article attempted to summarize the current knowledge of COVID-19 vaccines and portrayed some of the negative effects and, in some cases, outcomes of the vaccines. However, as is true for any tool in healthcare, vaccines are not without risks. In most cases adverse effects are attributable to other factors such as age or comorbidities and not solely to the vaccine itself. It should not be ignored that COVID-19 vaccines have saved millions of people's lives worldwide and so far, are the only effective weapon to fight and defeat the pandemic. Once again, information is key in this battle. However public perception and politics cannot be ruled out to play a role and, in some cases, a crucial role in the acceptance of vaccines by the general population.

One thing that transpired from this pandemic and how it has been handled is the need to educate the public about science to their level of understanding; also, the importance of transparency and honesty from governments and government agencies in fostering trust. It is not possible to ignore situations in which information has been concealed, an example being the Anthrax vaccine and how the FDA violated its own rules by failing to seek public comment on an experimental vaccine before approving the vaccine (Dyer, 2004), or how the Department of Defense maintained that the vaccine was safe, even when many service members did not believe the information that was being given to them about it (Black, 2004). Providing accurate information and truthful reporting to the public, offers individuals control over their own lives, something lacking when governments take control. Information is key, and in this case, less is more. Clear, simple, and straightforward evidence give back power to the public. Regulation of social media and all the gibberish posted and passed for truth can also help to mold public opinion in circumstances like the one discussed in this article. But finally, personal responsibility and seeking the truth based on scientific findings independent of political opinions is something available to us that should be pursued.

End Notes

End Note 1: Vaccines are known by their commercial name, their manufacturer, or vaccine name. Below is a list of the current vaccines along with their commercial name and manufacturer.

- AD26.COV2.S (Janssen; Janssen-Cilag or parent company Johnson & Johnson)
- AD5-nCOV (Convidecia Air™; CanSinoBIO)
- BBIBP-CorV (VeroCell; Sinopharm)
- BNT162b2 (Comirnaty; Pfizer/BioNTech)
- CHADOX1 NCOV-19 (Vaxzevria; AstraZeneca)
- DB15806 (CoronaVac; Sinovac)
- Gam-COVID-Vac (Sputnik V; Russia's Gamaleya Institute)
- mRNA-1273 (Spikevax; Moderna)
- SPFN_1B-06-PL (SpFN; Walter Reed Army Institute of Research (WRAIR)
- ZF-UZ-VAC-2001 (Zifivax; Anhui Zhifei Longcom)

End Note 2: Below is a list of some of the more relevant variants of COVID-19. It is worth mentioning that this list is not a complete compilation of all know variants:

- Alpha: B.1.1.7
- Beta: B.1.351
- Delta: B.1.617.2
- Delta Plus: AY.4.2
- Gamma: P.1; B.1.1.28.1
- Epsilon: P.2; P.3; B.1.427; B.1.429; B.1.617.1; B.1.526; B.1.525; C.37; B.1.621
- Omicron: BA.1; BA.2; BA.3; BA.4; BA.5; BQ.1; BQ.1.1; XBB.1.5; BF.7; XBB.1; BM.1.1.1; BN.1; BF.11; B.1.1.529; BA.2.75; CH.1.1; XBF; XE (recombinant BA.1/BA.2)

References

Abbattista, M., Martinelli, I., & Peyvandi, F. (2021). Comparison of adverse drug reactions among four COVID-19 vaccines in Europe using the EudraVigilance database: Thrombosis at unusual sites. *J Thromb Haemost.19*(10):2554-2558. http://doi. 10.1111/jth.15493.

Abraham, N., Spruin, S., Rossi, T., Fireman, B., Zafack, J., Blaser, C., Shaw, A., . . . Ogunnaike-Cooke S. (2022). Myocarditis and/or pericarditis risk after mRNA COVID-19 vaccination: A Canadian head-to-head comparison of BNT162b2 and mRNA-1273 vaccines. *Vaccine. 40*(32):4663-4671. http://doi.10.1016/j.vaccine.2022.05.048.

Ageno, W., Becattini, C., Brighton, T., Selby, R., & Kamphuisen, P.W. (2008). Cardiovascular risk factors and venous thromboembolism. *Circulation 117*:93–102. http://doi.10.1161/CIRCULATIONAHA.107.709204

Ali, N., Rahman, M., Hossain, A., Rahman, S., Paul, K.C., Thill, J-C, & Samuel, J. (2021). Public perceptions of COVID-19 vaccines: Policy implications from US spatiotemporal sentiment analytics. *Healthcare* (Basel). 9(9):1110. https://doi.org/10.3390/healthcare9091110

Aujesky, D., Obrosky, D.S., Stone, R.A., Auble, T.E., Perrier, A., Cornuz, J., Roy P.M., & Fine, M.J. (2005). Derivation and validation of a prognostic model for pulmonary embolism. *Amer J Respir Crit Care Med.* 172:1041–46. http://doi. 10.1164/rccm.200506-862OC

Baden, L.R., El Sahly, H.M., Essink, B., Kotloff, K., Frey, S., Novak, R., Diemert, D., . . . Zaks, T. (2021). COVE Study Group. Efficacy and safety of the mRNA-1273 SARS-CoV-2 vaccine. *N Engl J Med* 384:403–16.

Baraniuk, C. (2021). What do we know about China's COVID-19 vaccines? *BMJ* 373:n912 http://dx.doi.org/10.1136/bmj.n912

Black, L. (2006). Informed Consent in the Military: The Anthrax Vaccination Case. *AMA Journal of Ethics*, https://journalofethics.ama-assn.org/article/informed-consent-military-anthrax-vaccination-case/2007-10

Borau, S., Couprie, H., & Hopfensitz, A. (2022). The prosociality of married people: Evidence from a large multinational sample. *J Econ Psychol.* 92:102545. doi: 10.1016/j.joep.2022.102545.

Branda, F., & Tosi, D. (2022). Comparing worldwide, national, and independent notifications about adverse drug reactions due to COVID-19 vaccines. *Information*, 13, 329. https://doi.org/10.3390/ info13070329

Callaway, E. (2020). The race for coronavirus vaccines: a graphical guide. *Nature*, 580:576-577.

Centers for Disease Control and Prevention (CDC). (2023). http://dx.doi.org/10.1136/bmj.n912

Chen, Y., & Li L. (2020). SARS-CoV-2. virus dynamics and host response. *Lancet Infect*. Dis, 20:515-516.

Chodick, G., Tene, L., Rotem, R.S., Patalon, T., Gazit, S., Ben-Tov, A., Weil, C., . . .Muhsen, K. (2021). The Effectiveness of the Two-Dose BNT162b2 Vaccine: Analysis of Real-World Data. *Clin Infect Dis. 74*(3):474-78. http://dx.doi.org/10.1136/bmj.n912

Chou, O.H.I., Zhou, J., Lee, T.T.L., Kot, T., Lee, S., Wai, A.K.C., Wong, W.T., . . .Tse, G. (2022). Comparisons of the risk of myopericarditis between COVID-19 patients and individuals receiving COVID-19 vaccines: a population-based study. *Clin Res Cardiol. 111*(10):1098-1103. doi:10.1007/s00392-022-02007-0.

Christensen, J., Litherland, K., Faller, T., van de Kerkhof, E., Natt, F., Hunziker, J., Boos, J., . . . Swart, P. (2014). Biodistribution and Metabolism Studies of Lipid Nanoparticle–Formulated Internally [3H]-Labeled siRNA in Mice. *Drug Metabolism Disposition* 42:431–40. doi:10.1124/dmd.113.055434

Chu, H., & Liu, S. (2021). Integrating Health Behavior Theories to Predict American's Intention to Receive a COVID-19 Vaccine, *Patient Educ Couns. 104*(8):1878–1886.

CNN Health. (2023). FDA vaccine advisers 'disappointed' and 'angry' that early data about new Covic-19 booster shot wasn't presented for review last year. https://www.cnn.com/2023/01/11/health/moderna-bivalent-transparency/index.html

Dagan, N., Barda, N., Kepten, E., Miron, O., Perchik, S., Katz, M.A., Hernán, M.A., . . . Balicer, R.D. (2021). BNT162b2 mRNA COVID-19 vaccine in a nationwide mass vaccination setting. *N Engl J Med*. 384:1412–23.

Dash, S., Sirka, C.S., Mishra, S., & Viswan, P. (2021). Covid-19 vaccine induced Steven-Johnson syndrome: a case report. *Clin Exp Dermatol. 46*(8): 1615–1617. doi:10.1111/ced.14784

Dejnirattisai, W., Zhou, D., Supasa, P., Liu, C., Mentzer, A.J., Ginn, H.M., Zhao, Y., ...Screaton, G.R. (2021). Antibody evasion by the P.1 strain of SARS-CoV-2. *Cell*. 27;184(11):2939-2954.e9. doi: 10.1016/j.cell.2021.03.055.

Detoc, M., Bruel, S., Frappe, P., Tardy, B., Botelho-Nevers, E., & Gagneux-Brunon, A. (2020). Intention to participate in a COVID-19 vaccine clinical trial and to get vaccinated against COVID-19 in France during the pandemic. *Vaccine*, 38:7002–7006.

Dickerman, B.A., Gerlovin, H., Madenci, A.L., Kurgansky, K.E., Ferolito, B.R., Figueroa Muñiz, M.J., . . . Hernán, M.A. (2022). Comparative Effectiveness of BNT162b2 and mRNA-1273 Vaccines in U.S. Veterans. *N Engl J Med.* 13;386(2):105-115. doi: 10.1056/NEJMoa2115463

Dyer, O. (2004). US judge halts compulsory anthrax vaccination for soldiers. *BMJ*. 6;329(7474):1062. doi: 10.1136/bmj.329.7474.1062-a.

Elboraey, M.O., & Essa, E.E.S.F. (2021). Stevens-Johnson syndrome post second dose of Pfizer COVID-19 vaccine: a case report. *Oral Surg Oral Med Oral Pathol Oral Radiol*. 132(4):139–142. doi: 10.1016/j.oooo.2021.06.019

Ellis, H. (2021). James Phipps, first to be vaccinated against smallpox by Edward Jenner. *J Perioper Pract*, 31:51-52.

European Centre for Disease Prevention and Control. (2022). Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update http://dx.doi.org/10.1136/bmj.n912.

European Centre for Disease Prevention and Control (ECDC) (2023). http://dx.doi.org/10.1136/bmj.n912

European Medicines Agency (EMA). (2021a). Product Information Sheet on Vaxzevria (Previously COVID-19 Vaccine AstraZeneca). Amsterdam.

European Medicines Agency (EMA). (2021b). Product Information Sheet on Comirnaty (Pfizer-BioNTech). Amsterdam.

European Medicines Agency (EMA). (2021c). Product Information Sheet on Spikevax (Moderna). Amsterdam.

European Medicines Agency (EMA). (2021d). Recommends COVID-19 Vaccine AstraZeneca for Authorisation in the EU. https://www.ema.europa.eu/en/news/ema-recommends-COVID-19-vaccine-astrazeneca-authorisation-eu

Faria, N.R., Mellan, T.A., Whittaker, C., Claro, I.M., Candido, D.d.S, Mishra, S., Crispin, M.A.E., … Sabino, E.C. (2021). Genomics and epidemiology of the P.1 SARS-CoV-2 lineage in Manaus, Brazil. Science 372(6544):815-821. doi: 10.1126/science.abh2644.

Feldman, R.A., Fuhr, R., Smolenov, I., Mick Ribeiro, A., Panther, L, Watson, M., Senn, J.J., & Ciaramella, G. (2019). mRNA vaccines against H10N8 and H7N9 influenza viruses of pandemic potential are immunogenic and well tolerated in healthy adults in phase 1 randomized clinical trials. Vaccine 37(25):3326-3334. doi: 10.1016/j.vaccine.2019.04.074

Food and Drug Administration (FDA). (2020a). Fact Sheet for Healthcare Providers Administering Vaccine. Pfizer-BioNTech COVID-19 Vaccine. Revision: December 2020. Silver Spring: US Department of Health and Human Services, Food and Drug Administration.

Food and Drug Administration (FDA). (2020b). Pfizer-BioNTech COVID-19 Vaccine Emergency Use Authorization. Silver Spring: US Department of Health and Human Services, Food and Drug Administration.

Food and Drug Administration (FDA). (2020c). Moderna COVID-19 Vaccine Emergency Use Authorization. Silver Spring: US Department of Health and Human Services, Food and Drug Administration.

Food and Drug Administration (FDA). (2021a). Briefing document Janssen Ad26.COV2.S vaccine for the prevention of COVID-19. February 2021. Available at: https://www.fda.gov/media/146217/download

Food and Drug Administration (FDA). (2021b). Fact Sheet for Healthcare Providers Administering Vaccine. Pfizer-BioNTech COVID-19 Vaccine. Revision: January 2021. Silver Spring: US Department of Health and Human Services, Food and Drug Administration.

Franceschi, C., Capri, M., Monti, D., Giunta, S., Olivieri, F., Sevini, F., Panourgia, M.P., … Salvioli, S. (2007). Inflammaging and anti-inflammaging: a systemic perspective on aging and longevity emerged from studies in humans. *Mech Ageing Develop* 128:92–105. doi: 10.1016/j.mad.2006.11.016

Frederiksen, L.S.F., Zhang, Y., Foged, C., & Thakur, A. (2020). The long road toward COVID-19 herd immunity: vaccine platform technologies and mass immunization strategies. *Front Immunol* 11:1817.

Freeman, D., Loe, B.S., Yu, L.M., Freeman, J., Chadwick, A., Vaccari, C., Shanyinde, M., … Lambe, S. (2021). Effects of different types of written vaccination information on COVID-19 vaccine hesitancy in the UK (OCEANS-III): a single-blind, parallel-group, randomised controlled trial. *Lancet Public Health 6*(6):e416-e427. doi: 10.1016/S2468-2667(21)00096-7.

Gao, Q., Bao, L., Mao, H., Wang, L., Xu, K., Yang, M., Li, Y., … Qin, C. (2020). Development of an inactivated vaccine candidate for SARS-CoV-2. *Science* 369:77-81.

Gambichler, T., Scholl, L., Ocker, L., & Stranzenbach, R. (2021). Prompt onset of erythema multiforme following the first BNT162b2 SARS-CoV-2 vaccination. J *Eur Acad Dermatol Venereol, 35*(7):415–416. doi: 10.1111/jdv.17225

Granados-Riveron, J.T., & Aquino-Jarquin, G. (2021). Engineering of the current nucleoside-modified mRNA-LNP vaccines against SARS-CoV-2. *Biomed Pharmacotherapy* 142:111953. doi: 10.1016/j.biopha.2021. 111953

Greinacher, A., Thiele, T., Warkentin, T.E., Weisser, K., Kyrle, P.A., & Eichinger, S. (2021). Thrombotic thrombocytopenia after ChAdOx1 nCov-19 vaccination. *N Engl J Med.* 384:2092-101

Heath, P.T., Galiza, E.P., Baxter, D.N., Boffito, M., Browne, D., Burns, F., Chadwick, D.R., … Toback, S., 2019nCoV-302 Study Group. (2021). Safety and Efficacy of NVX-CoV2373 COVID-19 Vaccine. *N Engl J Med. 385*(13):1172-1183. doi: 10.1056/NEJMoa2107659.

Horby, P., Bell, I., Breuer, J., Cevik, M., Challen, R., Davies, N., Dabrera, G., . . . Semple, C. (2021). B.1.1.7 report. Global report investigating novel coronavirus haplotypes. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/982640/Feb_NERVTAG_update_note_on_B.1.1.7_severity.pdf

Hsieh, C.L., Goldsmith, J.A., Schaub, J.M., DiVenere, A.M., Kuo, H.C., Javanmardi, K., Le, K.C., … McLellan, J.S. (2020). Structure-based design of prefusion-stabilized SARS-CoV-2 spikes. *Science 369*(6510):1501-1505. doi: 10.1126/science.abd0826.

Hungaro Cunha, C., Sato, D.Y., Pereira de Godoy, J.M., da Silva Russeff, G.J., Franccini Del Frari Silva, D., Pereira de Godoy, H.J., … Guerreiro Godoy, M.F. (2022). Mortality and Deep Vein Thrombosis in the Gamma Variant of Covid 19 and Lung Injury. *Vascular Health and Risk Management* 18:833–838. https://doi.org/10.2147/VHRM.S367930

Ioannou, G.N., Locke, E.R., Green, PK., & Berry, K. (2022). Comparison of Moderna versus Pfizer-BioNTech COVID-19 vaccine outcomes: A target trial emulation study in the U.S. Veterans Affairs healthcare system. *EClinicalMedicine* 45:101326. doi: 10.1016/j.eclinm.2022.101326.

Joyce, M.G., Chen, W.H., Sankhala, R.S., Hajduczki, A., Thomas, P.V., Choe, M., Chang, W., … Modjarrad, K. (2021). SARS-CoV-2 ferritin nanoparticle vaccines elicit broad SARS coronavirus immunogenicity. *Cell Rep. 37*(12):110143. doi: 10.1016/j.celrep.2021.110143

Karlsson, L.C., Soveri, A., Lewandowsky, S., Karlsson, L., Karlsson, H., Nolvi, S., Karukivi, M., . . . Antfolk, J. (2021). Fearing the disease or the vaccine: The case of COVID-19. *Personal. Individ. Differ.* 172:110590.

Katella, K. (2021). Comparing the COVID-19 Vaccines: How Are They Different? Yale Medicine, Available from: https://www.yalemedicine.org/news/COVID-19 -vaccine-comparison

Kaur, S.P., & Gupta, V. (2020). COVID-19 Vaccine: A comprehensive status report. *Virus Res.* 288:198114.

Khan, K., Karim, F., Ganga, Y., Bernstein, M., Jule, Z., Reedoy, K., Cele, S., … Sigal, A., COMMIT-KZN Team. (2022). Omicron BA.4/BA.5 escape neutralizing immunity elicited by BA.1 infection. *Nat Commun. 13*(1):4686. doi: 10.1038/s41467-022-32396-9.

Khubchandani, J., Sharma, S., Price, J.H., Wiblishauser, M.J., Sharma, M., & Webb, F.J. (2021). COVID-19 vaccination hesitancy in the United States: A rapid national assessment. *J. Community Health* 46:270–277.

Kim, S.J., Chen, Z., Essani, A.B., Elshabrawy, H.A., Volin, M.V., Volkov, S., Swedler, W., . . . Shahrara, S. (2015). Identification of a novel TLR7 endogenous ligand in RA synovial fluid that can provoke arthritic joint inflammation. A*rthritis Rheumatol.* 68:1099–110. doi: 10.1002/art.39544

Kramps, T., & Probst, J. (2013). Messenger RNA-based vaccines: progress, challenges, applications. *Wiley Interdiscipl Rev RNA* 4:737–49. doi: 10.1002/wrna.1189

Kreps, S., Prasad, S., Brownstein, J.S., Hswen, Y., Garibaldi, B.T., Zhang, B., & Kriner, D.L. (2020). Factors associated with US adults' likelihood of accepting COVID-19 vaccination. *JAMA Netw.* Open 3:e2025594.

Lai, F.T.T., Leung, M.TY., Chan, E.W.W., Huang, L., Lau, LK.W., Peng, K., Leung, J.C.N., ... Chan, E.W.Y. (2022). Self-reported reactogenicity of CoronaVac (Sinovac) compared with Comirnaty (Pfizer-BioNTech): A prospective cohort study with intensive monitoring. *Vaccine 40*(10):1390-1396. doi: 10.1016/j.vaccine.2022.01.062.

Lazaros, G., Klein, A.L., Hatziantoniou, S., Tsioufis, C., Tsakris, A., & Anastassopoulou, C. (2021), The Novel Platform of mRNA COVID-19 Vaccines and Myocarditis: Clues into the Potential Underlying Mechanism. *Vaccine* 39:4925–27. doi: 10.1016/j.vaccine.2021.07.016

Lazarusc, J.V., Wyka, K., White, T.M., Picchio, C.A., Gostin, L.O., Larson, H.J., Rabin, K., . . . El-Mohandes, A. (2022). A survey of COVID-19 vaccine acceptance across 23 countries in 2022. *Nature Medicine*. https://doi.org/10.1038/s41591-022-02185-4

Lucia, V.C., Kelekar, A., & Afonso, N.M. (2021). COVID-19 vaccine hesitancy among medical students. *J. Public Health 43*(3):445-449. doi: 10.1093/pubmed/fdaa230.

Lyngse, F.P., Kirkeby, C.T., Denwood, M., Christiansen, L.E., Mølbak, K., Møller, C..H, Skov, R.L., ... Mortensen, L.H. (2022). Household transmission of SARS-CoV-2 Omicron variant of concern subvariants BA.1 and BA.2 in Denmark. *Nat Commun. 13*(1):5760. doi: 10.1038/s41467-022-33498-0.

Mari, D., Coppola, R., & Provenzano, R. (2008). Hemostasis factors and aging. *Exp Gerontol.* 43:66–73. doi: 10.1016/j.exger.2007.06.014

Malik, A.A., McFadden, S.M., Elharake, J., & Omer, S.B. (2020). Determinants of COVID-19 vaccine acceptance in the US. *E Clinical Medicine* 26:100495. doi: 10.1016/j.eclinm.2020.

Mavundza, E.J., Wiyeh, A.B., Mahasha, P.W., Halle-Ekane, G., & Wiysonge, C.S. (2020). A systematic review of immunogenicity, clinical efficacy and safety of human papillomavirus vaccines in people living with the human immunodeficiency virus. *Hum Vaccin Immunother.* 16:426-435.

McCabe, S.D., Hammershaimb, E.A., Cheng, D., Shi, A., Shyr, D., Shen, S., Cole, L.D., ... Lin, X. (2021). Unraveling Attributes of COVID-19 Vaccine Hesitancy and Uptake in the U.S.: A Large Nationwide Study. *medRxiv* [Preprint]. doi: 10.1101/2021.04.05.21254918.

Mok, C.K.P., Cohen, C.A., Cheng, S.M.S., Chen, C., Kwok, K.O., You, K., Chan, T.O., ... Hui, D.S. (2022). Comparison of the immunogenicity of BNT162b2 and CoronaVac COVID-19 vaccines in Hong Kong. *Respirology 27*(4):301-310. doi: 10.1111/resp.14191

Montano, D. (2022). Frequency and Associations of Adverse Reactions of COVID-19 Vaccines Reported to Pharmacovigilance Systems in the European Union and the United States. *Front Public Health* 9:756633. doi: 10.3389/fpubh.2021.756633.

Motta, M. (2021). Can a COVID-19 vaccine live up to Americans' expectations? A conjoint analysis of how vaccine characteristics influence vaccination intentions, *Soc. Sci. Med.* 272:113642.

Nagy, A., & Alhatlani, B. (2021). An overview of current COVID-19 vaccine platforms. *Comput Struct Biotechnol J.* 19:2508-2517.

Pavord, S., Scully, M., Hunt, B.J., Lester, W., Bagot, C., Craven, B., Rampotas, A., . . .& Makris M.N. (2021). Clinical Features of Vaccine-Induced Immune Thrombocytopenia and Thrombosis. *Engl J Med. 385*(18):1680-1689. doi: 10.1056/NEJMoa2109908.

Pierri, F., Perry, B.L., DeVerna, M.R., Yang, K.C., Flammini, A., Menczer, F., & Bryden, J. (2022). Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal. *Sci Rep. 12*(1):5966. doi: 10.1038/s41598-022-10070-w.

Polack, F.P., Thomas, S.J., Kitchin, N., Absalon, J., Gurtman, A., Lockhart, S., Perez, J.L., … Gruber, W.C., C4591001 Clinical Trial Group. (2020). Safety and efficacy of the BNT162b2 mRNA COVID-19 vaccine. *N Engl J Med.* 383:2603–15. doi: 10.1056/NEJMoa2034577

Pollard, C., Rejman, J., De Haes, W., Verrier, B., Van Gulck, E., Naessens, T., De Smedt, S., . . . De Koker, S. (2013). Type I IFN counteracts the induction of antigen-specific immune responses by lipid-based delivery of mRNA vaccines. *Mol Therapy* 21:251–59. doi: 10.1038/mt.2012.202

Rambaut, A., Lomanz, N., Pybus, O., Barclay, W., Barrett, J., Carabelli, A., Connor, T., … Volz, E. (2020). Preliminary genomic characterisation of an emergent SARS-CoV-2 lineage in the UK defined by a novel set of spike mutations. *Arambaut ARTIC Network.*

Rapaka, R.R., Hammershaimb, E.A., & Neuzil, K.M. (2022). Are Some COVID-19 Vaccines Better Than Others? Interpreting and Comparing Estimates of Efficacy in Vaccine Trials. *Clin Infect Dis. 74*(2):352-358. doi: 10.1093/cid/ciab213.

Rauch, S., Jasny, E., Schmidt, K.E., & Petsch, B. (2018). New vaccine technologies to combat outbreak situations. *Front Immunol.* 9:1963.

Reno, C., Maietti, E., Fantini, M.P., Savoia, E., Manzoli, L., Montalti, M., & Gori, D. (2021). Enhancing COVID-19 Vaccines Acceptance: Results from a Survey on Vaccine Hesitancy in Northern Italy. *Vaccines* (Basel). 9(4):378.

Rhea, E.M., Logsdon, A.F., Hansen, K.M., Williams, L.M., Reed, M.J., Baumann, K.K., Holden, S.J., . . . Erickson, M.A. (2020). The S1 protein of SARS-CoV-2 crosses the blood–brain barrier in mice. *Nat Neurosci*. 24:368–78. doi: 10.1038/s41593-020-00771-8

Ritter, T., Lehmann, M., & Volk, H. (2002). Improvements in gene therapy. *BioDrugs* 16:3–10. doi: 10.2165/00063030-200216010-00001

Rodda, L.B., Netland, J., Shehata, L., Pruner, K.B., Morawski, P.A., Thouvenel, C.D., Takehara, K.K., ... Pepper, M. (2021). Functional SARS-CoV-2-Specific Immune Memory Persists after Mild COVID-19. *Cell 184*(1):169-183.e17. doi: 10.1016/j.cell.2020.11.029

Rodrigues, A.F., Soares, H.R., Guerreiro, M.R., Alves, P.M., & Coroadinha, A.S. (2015). Viral vaccines and their manufacturing cell substrates: new trends and designs in modern vaccinology. *Biotechnol J.* 10:1329-1344.

Ruiz, J.B., & Bell, R.A. (2021). Predictors of intention to vaccinate against COVID-19: Results of a nationwide survey. *Vaccine* 39:1080–1086.

Rydyznski Moderbacher, C., Ramirez, S.I., Dan, J.M., Grifoni, A., Hastie, K.M., Weiskopf, D., Belanger, S., ... Crotty, S. (2020). Antigen-Specific Adaptive Immunity to SARS-CoV-2 in Acute COVID-19 and Associations with Age and Disease Severity. *Cell 183*(4):996-1012.e19. doi: 10.1016/j.cell.2020.09.038

Sadoff, J., Gray, G., Vandebosch, A., Cárdenas, V., Shukarev, G., Grinsztejn, B., Goepfert, P.A., ... Douoguih, M., ENSEMBLE Study Group. (2021). Safety and Efficacy of Single-Dose Ad26.COV2.S Vaccine against COVID-19. *N Engl J Med. 384*(23):2187-2201. doi: 10.1056/NEJMoa2101544.

Schultz, N.H., Sørvoll, I.H., Michelsen, A.E., Munthe, L.A., Lund-Johansen, F., Ahlen, M.T., Wiedmann, M., . . . Holme, P.A. (2021). Thrombosis and thrombocytopenia after ChAdOx1 nCoV-19 vaccination. *N Engl J Med. 384*(22):2124-2130. doi: https://doi.org/10.1056/nejmo a2104882

Schwarzinger, M., Watson, V., Arwidson, P., Alla, F., & Luchini, S. (2021). COVID-19 vaccine hesitancy in a representative working-age population in France: A survey experiment based on vaccine characteristics. *Lancet Public Health* 6: e210–e221.

Scully, M., Singh, D., Lown, R., Poles, A., Solmon, T., Levi, M., Goldblatt, T., ... Lester, W. (2021). Pathologic antibodies to platelet factor 4 after ChAdOx1 nCoV-19 vaccination. *N Engl J Med.* 384:2202-11. doi: 10.1056/NEJMoa2105385.

See, I., Su, J.R., Lale, A., Woo, E.J., Guh, A.Y., Shimabukuro, T.T., Streiff, M.B., ... Broder, K.R. (2021). US case reports of cerebral venous sinus thrombosis with thrombocytopenia after Ad26.COV2.S vaccination, March 2 to April 21, 2021. *JAMA. 325*(24):1-9. doi: https://doi.org/10.1001/jama.2021.7517

Sell, S. (2019). How vaccines work: immune effector mechanisms and designer vaccines. *Expert Rev Vaccines* 18:993-1015.

Shakeel, C. S., Mujeeb, A. A., Mirza, M. S., Chaudhry, B. & Khan, S. J. (2022). Global COVID-19 vaccine acceptance: a systematic review of associated social and behavioral factors. *Vaccines* (Basel) 10:110.

Simpson, C.R., Shi, T., Vasileiou, E., Katikireddi, S.V., Kerr, S., Moore, E., McCowan, C., … Sheikh, A. (2021). First-dose ChAdOx1 and BNT162b2 COVID-19 vaccines and thrombocytopenic, thromboembolic and hemorrhagic events in Scotland. *Nat Med* 27:1290–1297. https://doi.org/10.1038/s41591-021-01408-4

Soares, P., Rocha, J.V., Moniz, M., Gama, A., Laires, P.A., Pedro, A.R., Dias, S., . . .Nunes, C. (2021). Factors Associated with COVID-19 Vaccine Hesitancy. *Vaccines* (Basel) 9(3):300. doi: 10.3390/vaccines9030300.

Steinert, J.I., Sternberg, H., Prince, H., Fasolo, B., Galizzi, M.M., Büthe, T., & Veltri, G.A. (2022). COVID-19 vaccine hesitancy in eight European countries: Prevalence, determinants, and heterogeneity. *Sci. Adv.* 8:1-15.

Tan, A.T., Linster, M., Tan, C.W., Le Bert, N., Chia, W.N., Kunasegaran, K., Zhuang, Y., … Bertoletti, A. (2021). Early induction of functional SARS-CoV-2-specific T cells associates with rapid viral clearance and mild disease in COVID-19 patients. *Cell Rep. 34*(6):108728. doi: 10.1016/j.celrep.2021.108728.

Tanriover, M.D., Doğanay. H.L., Akova, M., Güner, H.R., Azap, A., Akhan, S., Köse, Ş., … Unal, S., CoronaVac Study Group. (2021). Efficacy and safety of an inactivated whole-virion SARS-CoV-2 vaccine (CoronaVac): interim results of a double-blind, randomised, placebo-controlled, phase 3 trial in Turkey. *The Lancet 398*(10296):213–22.

Terry, M. (2021). UPDATED Comparing COVID-19 Vaccines: Timelines, Types, and Prices: BioSpace; https://www.biospace.com/article/comparing-c ovid-19-vaccines-pfizer-biontech-moderna-astrazeneca-oxford-j-and-j-russia-s-sp utnik-v/.

The Guardian (2022). EU executive rebuked for not disclosing Von der Leyen-Pfizer texts. https://www.theguardian.com/world/2022/jan/28/european-commission-guilty-of-maladministration-over-pfizer-texts-ursula-von-der-leyen-covid-vaccine

Thibault, D.L., Graham, K.L., Lee, L.Y., Balboni, I., Hertzog, P.J., & Utz, P.J. (2009). Type I interferon receptor controls B-cell expression of nucleic acidsensing Toll-like receptors and autoantibody production in a murine model of lupus. *Arthritis Res Therapy* 11:R112. doi: 10.1186/a r2771

Tobaiqy, M., Elkout, H., & MacLure, K. (2021). Analysis of Thrombotic Adverse Reactions of COVID-19 AstraZeneca Vaccine Reported to EudraVigilance Database. *Vaccines* (Basel) 9(4):393. doi: 10.3390/vaccines9040393.

Tomori, O., & Kolawole, M.O. (2021). Ebola virus disease: current vaccine solutions. *Curr Opin Immunol.* 71:27-33.

Troiano, G., & Nardi, A. (2021). Vaccine hesitancy in the era of COVID-19. *Public Health* 194: 245–251.

Ungvari, Z., Tarantini, S., Donato, A.J., Galvan, V., & Csiszar, A. (2018). Mechanisms of vascular aging. *Circ Res.* 123:849–67. doi: 10.1161/circresaha.118.311378

Vallazza, B., Petri, S., Poleganov, M.A., Eberlec, F., Kuhn, A.N., & Sahin, U. (2015). Recombinant messenger RNA technology and its application in cancer immunotherapy, transcript replacement therapies, pluripotent stem cell induction, and beyond. *Wiley Interdiscipl Rev RNA* 6:471–99. doi: 10.1002/wrna.1288

Verhoef, J.J.F., Carpenter, J.F., Anchordoquy, T.J., & Schellekens, H. (2014). Potential induction of anti-PEG antibodies and complement activation toward PEGylated therapeutics. *Drug Disc Today* 19:1945–52. doi: 10.1016/j.drudis.2014.08.015

Voysey, M., Costa Clemens, S.A., Madhi, S.A., Weckx, L.Y., Folegatti, P.M., Aley, P.K., Angus, B., ... Pollard, A.J., Oxford COVID Vaccine Trial Group. (2021). Single-dose administration and the influence of the timing of the booster dose on immunogenicity and efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine: a pooled analysis of four randomised trials. *Lancet. 397*(10277):881-891. doi: 10.1016/S0140-6736(21)00432-3.

Ward, J.K., Alleaume, C., Peretti-Watel, P., Seror, V., Cortaredona, S., Launay, O., Raude, J., ... COCONEL Group (2020). The French public's attitudes to a future COVID-19 vaccine: The politicization of a public health issue. *Soc. Sci. Med.* 265:113414.

WHO. (2021). COVID-19 Vaccine Tracker and Landscape. www.who.int/publications/m/item/ draft-landscape-of-COVID-19-candidate-vaccines

WHO (World Health Organization official website). (2023) https://www.who.int/emergencies/diseases/novel-coronavirus-2019?adgroupsurvey={adgroupsurvey}&gclid=CjwKCAiAioifBhAXEiwApzCztuGUpkpFtsOIuwXsvpj7KxZ8uWJlN_fzi1tsrEVMrI8TQybYv-rR9xoCIrMQAvD_BwE

Yancy, C.W. (2020). COVID-19 and African Americans. *JAMA 323*(19):1891–2.

Yu, J., Yuan, X., Chen, H., Chaturvedi, S., Braunstein, E.M., & Brodsky, R.A. (2020). Direct activation of the alternative complement pathway by SARS-CoV-2 spike proteins is blocked by factor D inhibition. *Blood* 136:2080–89. doi: 10.1182/blood.2020008248

Zhang, S., Liu, Y., Wang, X., Yang, L., Li, H., Wang, Y., Liu, M., ... Hu, L. (2020). SARS-CoV-2 binds platelet ACE2 to enhance thrombosis in COVID-19. *J Hematol Oncol.* 13:120. doi: 10.1186/s13045-020-00954-7

Zhang, Y., Zeng, G., Pan, H., Li, C., Hu, Y., Chu, K., Han, W., ... Zhu, F. (2021). Safety, tolerability, and immunogenicity of an inactivated SARS-CoV-2 vaccine in healthy adults aged 18–59 years: a randomised, double-blind, placebo-controlled, phase 1/2 clinical trial. *Lancet Infect Dis. 21*(2):181–92.

Health Care Outcome Disparities: A Cause to Infuse Health Care Curriculum

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The contents of this manuscript do not reflect the policy or opinions of the authors' universities or the agencies which the authors serve. The authors have no financial conflicts of interest.

Abstract

This article explores the manifestation of healthcare outcome disparities based on racial, gender, and socio-economic factors. A recent examination of healthcare outcome disparities illuminates the consequences of a long and painful history of discrimination against minority populations in the United States. This article advocates the construction of interdisciplinary research teams that harnesses expertise from multiple areas outside of STEM (Science, Technology, Engineering, and Math) fields and that can craft solutions to address the social impact of medical advances. Such teams can infuse new perspectives and awareness of the broader consequences of medical research at all levels of academia. Healthcare outcome disparities represent a complex concern with no easy solutions. However, integration of this subject matter into the curriculum at every level of training for healthcare professionals may inspire a diverse response from a wide range of insights and interests to ameliorate these persistent issues. The literature reviewed for this article postulates that interdisciplinary research teams (including patients and community members) may foster innovative paradigm shifts creating breakthroughs in clinical methods (e.g., treatment procedures for a variety of ailments).

Keywords: healthcare disparities, curriculum, racial, gender, socioeconomic demographics, interdisciplinarity

Introduction

This article focuses on the criticality of building awareness of health disparities, their implications, and critical mitigations or interventions in the educational venues for healthcare professionals at all levels. The track record of healthcare in this country regarding ethnic, gender, and socio-economic demographics represents a case study of injuries from neglectful ignorance at best and monstrous disregard for the sanctity of human life at its worst. These medical disparities have their roots in the fabric of this country from the eighteenth century onward.

A recent book by Harriet Washington includes numerous accounts of the malevolent treatment of African Americans (viz., healthcare in the United States). She opens her book by contrasting two competing perspectives on Dr. James Marion Sims, considered a pioneer in the field of obstetrics and gynecology, who also serially mutilated the bodies of enslaved Black women. Washington (2006) recounts the brutal and tortuous genesis of the gynecological discipline:

> Betsy's [an enslaved woman depicted in portraits of Dr. Sims as a subject of his experimentation] voice has been silenced by history, but as one reads Sims's biographers and his own memoirs, a haughty, self-absorbed researcher emerges, a man who bought black woman slaves and addicted them to morphine in order to perform dozens of exquisitely painful, distressingly intimate vaginal surgeries. Not until he had experimented with his surgeries on Betsy and her fellow slaves for years did Sims essay to cure white women (Washington, 2006, p. 2).

The variety of disparities in healthcare outcomes based on racial/gender and socioeconomic factors appear across the spectrum of illnesses experienced in the human family. The general postures of society, whether governmental, educational, medical, industrial, or theological have conceived and perpetuated these disparities. Ameliorating these inequities necessitates recognition of their existence, revision of the practices that foster their perpetuation, and individual and communal engagement in continuous improvement aimed toward more balanced healthcare outcomes. It is critical that both the overall reduction in illnesses for all populations and an improvement in the likelihood that clinical research and treatments are grounded in the potentially impactful and unique demographic variables that affect healthcare outcomes.

The mistrust that remains a pervasive element of the psyche in many sectors of African American community exists from the vast and considerable legacy of "Medical Apartheid" well-articulated by Harriet Washington and forward through the relative recency of the Tuskegee Experiments. Since the turn of the 21st century, governmental efforts appear to have increased regarding the study and documentation of healthcare and treatment outcome disparities. Studies reviewed for this article articulate the increased effort by the U.S. government to document these disparities (Arday et al., 2000). identified a variety of inaccuracies in healthcare databases regarding the information on race and ethnicity critical to assessing outcome disparities. Their article discusses incremental efforts, from 1978 to the present, to minimize information gaps. These authors note the following regarding a presidentially focused effort:

> In February 1998, President Clinton committed the Nation to eliminate the disparities in six areas of health status experienced by racial and ethnic minority populations: (1) infant mortality, (2) cancer screening and management, 3) cardiovascular disease, 4) diabetes,

> 5) human immunodeficiency virus infection/acquired immunodeficiency syndrome, and 6) immunizations (US Department of Health and Human Services, 1999) (Arday et al., 2000, p. 109).

The unfortunate reality of disparities in healthcare treatment outcomes exists throughout the human life cycle from pediatrics to post-mortem. It is well established that there are numerous inaccuracies in the forensic sciences impacting aspects of identification related to African Americans and other ethnic groups, (Washington, 2018). A recent article contextualizes the manifestations of disparities in the outcomes of the readings of arterial oxygen saturation in African American patients versus white patients. Valbuena et al. (2022) articulate the troubling results as follows:

> Compared to White patients, critically ill Black patients receiving mechanical ventilatory support had increased risk of occult hypoxemia defined as low SaO_2 despite a pulse oximetry reading within ranges of 92% to 96%. Similarly, higher odds of occult hypoxemia amongst Black patients were noted even at higher SaO_2 levels. Bland-Altman plots similarly demonstrated racial differences in bias, precision, and (consequently) root mean square error--all worse in Black patients. There was no evidence of such diminished detection of occult hypoxemia in Hispanic and Asian patients compared with White patients (Valbuena et al., 2022, p. 974).

Extrapolating the potential delay in seeking medical attention related to COVID-19 infection based on inaccurate pulse oximeter readings has catastrophic implications for African Americans in particular. In many ways, this apparent design flaw represents the fundamental lack of acknowledgment of the diversity of patients in medical device design and engineering.

This contemporary example illustrates the persistent manifestation of disparate outcomes. The intent of this discourse revolves around the need to: a) acknowledge the ubiquitous presence of these disparities at all levels of clinical research and practice, b) to study these manifestations in an integrative or interdisciplinary manner, c) determine the root causes, mitigations, and d) integrate the subject matter into the mainstream of curriculum for healthcare professionals at all levels and disciplines of education. As outlined herein, the manifestations and causes for these disparities frame the quintessential application of interdisciplinary mental modeling and mixed methodological approaches.

Herein, the authors advocate an increase in interdisciplinary research, the infusion of awareness of the disparities in clinical treatment outcomes in the general curriculum for every level of clinical education, and a focus on the proliferation of clinical methods focused on improving outcomes. An interdisciplinary approach integrates the mix of quantitative and qualitative data utilized to understand and define root causes. Moreover, these disparities are rooted in complex human cultural contexts in addition to nominally scientific and clinical data; hence a singular analytical approach or research methodology has limitations.

Ultimately this notion of interdisciplinarity research flows from an epistemological orientation: how do we know something and what is the best process to gain that knowledge? As will be discussed later, a way of knowing is rooted in cultural, social, and colloquial habits. These habits impact what is seen or perceived and, by extension, what can be understood and gleaned from the process of research. Repko & Szostak (2017) frame a definition of interdisciplinary research as follows:

> Interdisciplinarity involves a set of practices: asking research questions that do not necessarily constrain theories, methods, or phenomena; drawing upon diverse theories and methods; drawing connections among diverse phenomena; evaluating the insights of scholars from different disciplines in the context of disciplinary perspective; and integrating the insights of those disciplinary scholars in order to achieve a holistic understanding (Repko & Szostak, 2017, p. 9).

Razzaq et al. (2013) quote the following from the National Academy of Sciences:

> Interdisciplinary research (IDR) is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice (Razzaq et al., 2013, p. 153).

Torraco et al opine that an integrative process facilitates an elevated research agenda by including paradigms outside of the current standard unilateral literature review methods. In recognition of the limitations of randomized control trial (RCT) methods to excavate the sources of healthcare disparities, this article parallels the conclusion that a more inclusive search mitigates those blind spots.

Finally, in looking at the complexity of racial and socioeconomic factors in terms of health outcome disparities, many assumptions, values, and interpretations have to be challenged. Lau et al., (2016) caution researchers in terms of assumed equivalency of efficacy of interventions:

> Researchers also cannot assume that interventions will have equivalent effects on symptoms and functional impairment outcomes across ethnic groups. For example, the impairment associated with depression symptoms appears to differ between Latinos and Whites (Huang, Chung, Kroenke, & Spitzer, 2006) and less improvement in impairment has been observed in African Americans receiving CBT [cognitive behavioral therapy] compared to other groups (Miranda et al. 2003). A combined quantitative and qualitative approach may help identify the relevant dimensions of symptoms and impairment that are meaningful to ethnic minorities in clinical trials (Lau et al., 2016, p. 408).

The propensity for researchers and clinicians to postulate that treatment methods and outcomes based primarily on data from a myopic demographic view, that is, white and male, must be mitigated by treatment methods that incorporate a diverse, equitable, and inclusive frame of reference. Incorporating diverse and inclusive frames of reference can provide a source of disruptive and innovative insights increasing the likelihood of improved outcomes. The educational and training curriculum necessarily, as a matter of life and death, incorporate these diverse views.

This article approaches the subject by sharing some background perspectives and the case for change. A discussion section follows to elaborate on the implications garnered from a variety of perspectives. The section outlines five themes that articulate the basis for the insights herein.

Lastly, we reiterate the advocacy for the infusion of awareness of these and other disparities into the general curriculum for every level of clinical education. Further, there must be a focus on increasing interdisciplinary research to create new or enhanced clinical methods directed at improving outcomes.

Background and Case for Change

Healthcare disparities in the U.S. supervene from oncogenic practices entrenched in the history of cultural, ethical, and socioeconomic systems of this country. The litany of examples, ranging from simple ignorance to calculated subjugation, underscore the brutal consequences borne by marginalized populations vis a vis disparate healthcare outcomes over time. While these problems are certainly not unique to the U.S., this article focuses on the retarding domestic effects of these systems. Washington (2006) quotes Dr. Martin Luther King Jr. as follows in regard to healthcare disparities:

> *"Of all the forms of inequality, injustice in healthcare is the most shocking and the most inhumane." In 1965 Martin Luther King Jr. spoke these words in Montgomery Alabama, at the end of the Selma to Montgomery March…*
>
> (Washington, 2006, p. 3).

Healthcare disparities are present in nearly every area of the healthcare delivery system. Along the continuum from the various healthcare institutions (e.g., hospitals, medical schools, insurance companies, research institutions, clinics, etc.) to individual patient attitudes, habits, and practices, there are a plethora of independent and confounding variables that impact these disparities.

Valdovinos et al. (2020) tackle the thorny issue of affordable access to healthcare and the implications for treatment outcomes. These researchers endeavored to study the impact of expanding Medicaid eligibility through the Affordable Care Act and the attenuated outcomes related to acute myocardial infarction (AMI). These researchers looked at two states, California and Florida between 2010 and 2015. California, a state that expanded Medicaid, was compared with Florida, a state which did not expand Medicaid. They set the context as follows, describing the outcome for AMI generally:

> Despite advances in care for acute myocardial infarction (AMI), or heart attack, racial and ethnic minorities have experienced decreased access to care and worse outcomes than white patients after AMI [1–10]. These racial inequities exist across the entire spectrum of care after AMI, from access to care, to acute treatments, to long-term outcomes. African American patients with AMI are less likely than white patients to be admitted to hospitals that perform invasive procedures to treat AMI (e.g., percutaneous coronary intervention (PCI)), [5] and less likely than white patients to be transferred to receive these procedures [6, 11] (Valdovinos et al., 2020, p. 2).

These researchers outline a context that thematically resonates with a variety of healthcare disparities in terms of outcomes across different disease categories. Moreover, reflecting on the six areas of focus articulated by the Clinton administration, the narrative looks at four of the six.

There is a range of concerns regarding the root of healthcare disparities in terms of outcomes and treatment efficacy. To name a few: a) access to affordable healthcare providers and institutions; b) effective communication, translation of the focus and responsibilities of treatment regiments, multilateral cultural attitudes, habits, practices, values, and interpretive lenses; c) research methods and theoretical models that are narrowly focused (e.g., with regard to DEI (diversity, equity, and inclusion), with regard to RCT, etc.); d) disparities in educational attainment and perspectives; e) issues of mistrust, clinicians educational attention to healthcare disparities and implications; and other concerns.

An important outcome of the work of Valdovinos et al. (2020), related to some improvement as a function of improved access (viz the Affordable Care Act) but these improvements are limited in scope. The authors note as follows:

> Our study found that Medicaid expansion was associated with a decrease in racial disparities in transfers to PCI-capable hospitals for patients who initially presented to non-PCI hospitals and rates of PCI after AMI. Our results did not identify an association between the Medicaid expansion and changes in racial disparities for the overall likelihood of admission to PCI hospitals, 30-day readmissions, or in-hospital mortality (Valdovinos et al., 2020, p. 10).

However, the authors confirm that other confounding variables exist that impede mitigation of healthcare disparities in their specific case and generally:

> Additionally, as other studies have demonstrated, not all types of insurance are treated equally [28]; because both being uninsured and having Medicaid insurance (versus private insurance) are associated with decreased access to care and rates of PCI for AMI, the expansion of Medicaid alone may not be sufficient to address racial disparities in care and outcomes after AMI. Finally, while access to care is fundamental to improving outcomes after AMI, years of literature have demonstrated persistent racial disparities in treatment and outcomes after AMI even among individuals with the same type of insurance. This suggests that structural racism is a factor that must be directly addressed if eliminating decades-long racial inequities in access, treatment and outcomes after AMI is to be achieved (Valdovinos et al., 2020, p. 12).

As this discourse progresses, more specificity about some of the other factors needing to be considered come to the forefront. For example, systemic thinking is required, which connects with the concept of interdisciplinary approaches to mitigate this problem. Innovation in this space will flow from humility in regard to dogmatic paradigms toward a vacillation between other ways of knowing, divergent and convergent discourse, in a manner advocated by Thomas Kuhns in *The Structure of Scientific Revolutions.* Humility or more open-minded considerations of cultural habits and practices of various demographic groups (e.g. gender, socioeconomic, ethnic, and racial) and the potential impact on healthcare outcomes, that is clinical research/practice and potentially improved healthcare outcomes.

One set of researchers noted the extra resources required in terms of labor, sourcing of patients for clinical trials, methodological complexities, and financial costs, as impediments to expanding the scope of clinical trials and other treatment modalities to be more inclusive. Clearly, the cost of not addressing these hurdles proves staggering on its own, particularly in light of the medical burden endured by patients who remain left behind as a consequence. Such an opinion eschews the moral imperative that should form the basis of medical research. It is not simply about the financial costs, it is about the lives saved and medical burdens lessened. This complaint allegorizes the introduction of the lunar space mission by President Kennedy

President Kennedy asked the nation to embark on a journey to the moon. Was it expensive? Yes. Was it challenging? Yes. Did it have a quantifiable return on investment with a high bond rating? No! He based his rationale on national interest. What can be more in the interest of the nation than equitably and equally caring for the citizenry without regard for racial and socioeconomic standing? What more powerful life-affirming stand could the nation take? His remarks contextualize the importance of eliminating healthcare disparities in terms of quality of life and economic prosperity. Space.com (2011) quotes President Kennedy's perspective on the level of interdisciplinary and systemic thinking required:

> This decision demands a major national commitment of scientific and technical manpower, material and facilities, and the possibility of their diversion from other important activities where they are already thinly spread. It means a degree of dedication, organization and discipline which have not always characterized our research and development efforts. … New objectives and new money cannot solve these problems. They could in fact, aggravate them further--unless every scientist, every engineer, every serviceman, every technician, contractor, and civil servant gives his personal pledge that this nation will move forward, with the full speed of freedom, in the exciting adventure of space (Space.com, 2011).

President Kennedy garnered support for the lunar mission even with a beneficial-but-esoteric outcome for the American public. Although the advocacy for investment in interdisciplinary research application reflects this example, what differentiates the two is the result certainty: the outcome of investing in new research methods is easily quantifiable. In spite of this knowledge, however, resistance to improvement remains.

In closing the dialogue for the case for change and the foundation of the advocacy for impacting clinical training to incorporate awareness of the issues associated with disparities in healthcare outcomes, two researchers frame the context for the dialogue: Bao et al (2007) and Stevens & Shi (2002). In the discussion section of this article, the authors relay first-hand experiences that align with the scholarly literature. Further, citations relaying insights from podcasts and documentaries substantiate this perspective.

Bao et al. (2007), discuss the contrast in cancer screening "between" versus "within" physician differences based on racial/ethnic/socioeconomic status and how those biases manifest when patients are cared for by different physicians than their white counterparts or with higher SES (socioeconomic status). The "within physician" differences manifest when patients are cared for by the same physician as their white counterparts but receive different care. This perspective illustrates some of the variables related to the approach and interactions with patients regarding cancer screening. Additionally, it illuminates some of the complications associated with patient and physician cultural and socio-economic paradigms as they impact disparities. The researchers used surveys from trials conducted by the "Communication in Medical Care" research series in Southern California. The impact of physician attitude had bearing:

> … physicians may perceive minority or low-SES patients to be less interested in cancer screening and/or less likely to adhere to screening (van Ryn and Burke 2000) and thus may be more likely to forgo discussing cancer screening in the first place. … Finally, patient

> preferences and physician attitudes and perceptions may interact to reinforce each other over time (Bao et al., 2007, p. 953).

As noted earlier, at every stage of life, these healthcare disparities are present. Stevens & Shi (2002) conducted research relating to health disparities in the quality of primary care for children. Their research indicated a lack of attention to the quality of primary care quality for children. They conducted inquiries via structured telephone interviews utilizing the "Primary Care Assessment Tool." The sample population came from a school district in San Bernardino County, California. They reviewed the "cardinal features of primary care quality" and found the following:

> After controlling for family demographics, socioeconomic status, and health system characteristics, minority children experienced poorer quality of primary care across most domains of care compared with white children. Asian Americans reported the lowest quality of care across most domains, but particularly in first-contact utilization, interpersonal relationship, and comprehensiveness of services received. (Stevens & Shi, 2002, p. 573).

Overall, historical inequality in healthcare affects a wide range of groups across the divisions and intersections of race, gender, and socioeconomic identifiers. Contemporary manifestations of these inequities reflect the insidious effects of the medical burden endured by these communities and their exclusion from research inquiry. The expansion of curriculum across healthcare educational disciplines will build awareness of disparities, and their implications and frame a sturdy foundation for critical mitigations (in terms of healthcare disparities).

Discussion

This article review outlined five primary elements flowing from the aforementioned references for this discussion. However, there are additional elements and intricacies beyond the taxonomy noted. The primary themes outlined in this article are:

a) Access to affordable healthcare providers and institutions,

b) Cultural factors (e.g., effective communication, translation of the focus and responsibilities of treatment regiments, multilateral cultural attitudes, habits, practices, values, and interpretive lenses)

c) Research methods and theoretical models that are narrowly focused (e.g., with regard to DEI, with regard to RCT, etc.),

d) Healthcare professional awareness of cultural dimensions,

e) Issues of mistrust, clinicians' educational attention to healthcare disparities and implications, and other concerns.

Access to Affordable Healthcare

Two studies reviewed contextualize the impact of access to healthcare. The studies indicate persistent disparities in healthcare outcomes. Valdovinos et al. (2020) focused on the impact of access to healthcare in regard to the treatment of acute myocardial infarction. Lynch et al. (2015) focused on patterns of multimorbidity in the context of patients with type 2 diabetes. Valdovinos et al. (2020) demonstrated improvement in outcomes based on accessibility to healthcare insurance. Recall, Valdovinos et al. (2020) compared two states, California and Florida. California is representative of a state that expanded the ACA. Florida is representative of a state that did not expand the Affordable Care Act. Two points about the impact of access to affordable healthcare insurance are striking. First, there was some improvement in treatment based on a narrow element, but the net impact overall was negligible. Moreover, the researchers found that there was variability in treatment even with patients with private insurance coverage.

Turning to Lynch et al., (2015), these authors interestingly point to challenges in multimorbidity in the context of patients with type 2 diabetes. One of the sample populations was patients in the Veterans Administration healthcare system. The researchers came to a common conclusion (viz healthcare disparities):

> Among individuals with diabetes, traditionally disadvantaged groups, including non-Hispanic blacks and rural patients, appear to bear the greatest burden and risk of multimorbidity. Significantly greater odds with increasing number of comorbidities were seen by race/ethnicity, rural residence, and geographic region (Lynch et al., 2015 p. 27).

Importantly, the patient base had similar access to healthcare and thus offers an important point of research relative to other factors and variables that account for disparities. They noted the following:

> There are important advantages in showing the pattern of multimorbidity in a very large population of patients who have similar access to healthcare, such as in the VA healthcare system. The paradigm shift in the focus of care toward patients rather than their disease, combined with provisions from the Affordable Care Act that increase access to healthcare across the broader U.S. population, should enhance the ability of various healthcare systems to improve the management of multimorbidity. However, the shifting demographic toward racial/ethnic minorities who bear a heavier burden and higher risk of chronic disease, with poorer control, calls for greater focus on comprehensive patient-focused interventions that empower patients for greater self-management (Lynch et al., 2015, p 30).

This study along with the AMI study indicate a far more complex issue in terms of mitigating healthcare disparities than access to affordable healthcare might otherwise provide. Increased access is a critical element of the eventual algorithm.

Cultural Factors

Cultural factors impact the communication and interpretation of healthcare information and treatment plans. These complex factors can also impact trust and therefore disclosure. From the aspect of dimensions of diversity, many constructs can be used to articulate these complexities. A common metaphor is that of an iceberg. Above the waterline, one can see more obvious elements of diversity (in both patients and healthcare providers). Above the waterline are elements like racial dimensions, gender dimensions, generational dimensions, and so forth. Below the waterline are less obvious elements like nationality, religious or spiritual beliefs, educational background, communication styles, cultural traditions, and so forth. Elements of power and cultural implications of power dynamics play a role. Again, this is a multimodal dynamic between patients, healthcare providers, and insurance providers; in short, a systemic context.

Revisiting the cancer screening study, the researchers noted the following in terms of screening disparities:

> However, disparities in cancer screening utilization exist even among people with a usual source of care or who regularly visit their physicians (for example, McMahon et al. 1999; also see Table 2). Studies have examined patient reported barriers to cancer screening and found that a greater proportion of minority and low-SES persons cite "lack of awareness" and "not recommended by a doctor" as the main barriers (Finney, Nelson, and Meissner 2004), suggesting that racial/ethnic and SES disparities in physician–patient communication regarding cancer screening may have contributed to disparities in screening rates (Bao et al., 2007, p. 952).

In particular, examining educational levels, Bao et al. (2007)) found three important insights related to cultural dynamics:

> First, patients with low education may have had less exposure to various health topics including cancer screening from sources other than one's health care providers and are thus less likely to initiate discussion with their physicians about cancer screening. … Second, deficits in comprehension and cognitive abilities and in health literacy in particular associated with lower education may have put these patients at a disadvantage when it comes to cancer screening (IOM 2004). The decision about cancer screening necessarily involves tradeoffs between future benefits and current costs, which is likely an important element of physician–patient discussion. … Third, physicians may hold stereotypes of low-education patients (e.g., "low-education patients are less interested in screening"), and interact with their low-education patients in a different way, forgoing opportunities of discussing cancer screening during a clinical encounter (Bao et al., 2007, p. 965).

In reviewing methodologies for conducting healthcare research, Lau et al., (2016) note some of the limitations of RCT's (randomized control trial) in regard to real world application, particularly in a mental health context. Regarding language, a critical cultural dimension, they note as follows:

> It is imperative that trials provide assessment and treatment in the appropriate language(s) and dialect(s) spoken by the ethnic group under study. However, a metanalytic review of 76 studies evaluating interventions culturally adapted for ethnic minorities revealed that 40% of the studies included only native English speakers (Griner & Smith, 2006). Of those trials including non-native English speakers, 25% provided treatment only in English (Lau et al., 2016, p. 405).

Lastly, Song et al. (2014) clearly described the point herein articulating the relevance of cultural diversity and healthcare outcomes and approaches. Their study sought to articulate the relationship between patient-provider communication and social-cultural factors related to prostate cancer treatment. The ultimate conclusion was that race was not the controlling factor in terms of differences in patient quality of care between African American and Caucasian men. The view of race as a cultural construct was acknowledged by the researchers. Furthermore, and uniquely, these researchers parsed various attributes within various dimensions of diversity outside of race and found that positive communication in terms of patient-provider was associated with high school education or higher, greater religious beliefs, physician trust, and less perceived racism.

The authors concede and even support the conclusion that inclusive behavior, infused with respect, empathic and active listening, along with concurrent axiological or values frames should produce positive outcomes. This does not mitigate the impact of race as a social construct. The likelihood of having lower socioeconomic status, educational levels, and higher levels of perceived racism do fall out along racial lines. For example, even in their results, the researchers found a higher level of perceived racism among African Americans versus their Caucasian counterparts. Now, fold in higher levels of education, and like Bao et al. (2007), improved outcomes are anticipated.

Communication is an undisputed element of cultural paradigms, and communication dynamics play out in both racial and ethnic frames of reference. Nobles, Goddard, and Cavil (1985) define culture's prime characteristic as that it frames the basis for interpreting reality. Further, culture is the medium wherein the nine areas of human activity, outlined by Fuller (1971) are expressed as actions and reactions to white supremacy as a cultural paradigm (e.g. education, politics, economics, etc.). Nobles, Goddard, and Cavil (1985) define culture as follows:

> When culture is defined as a scientific construct it becomes by definition, "the process which gives people a general design for living and patterns for interpreting reality." As such nothing human happens outside of culture. Culture is the medium of human functioning (Nobles, Goddard, and Cavil,1985, p.5).

Cultural paradigms act as a superstructure in which research, analysis, clinical practice, and healthcare education all exist and frame meaning. Culture outlines what values get primacy; and what epistemology is preferred. The United States represents a multicultural society that requires a compound lens to integrate perspectives. No single discipline has the analytical dexterity to frame all the things that subsume human activity and fundamentally necessitates an interdisciplinary modality

Collins (1998) as well as other authors (Ore, 2008); Gans, 2005)) speak to what can be framed vis a vis race and socio-economic constructs. The analysis by Song et al. (2014) is admirable but falls short in terms of dealing with the complexities of cultural differences regarding race, gender, and socio-economic dynamics. These authors help outline an interpretive lens for analysis, but the analysis falls short of root cause identification. In fact, Gans (2005) asks and answers the question of the persistence of racial constructs and hierarchy as a function of reinforcing the "country's socioeconomic pecking order." Yet the question of why that pecking order exists, seemingly universally, as witnessed by Trask (1999), remains unanswered. Pecking order is a euphemism for power dynamics. In the physician-patient paradigm, all the pressures and implications of social power dynamics manifest between these two parties. While communication can generally be enhanced by polite and even engaging dialogue, the dynamic of effective physician-patient communication rests on navigating those differences.

> Within unjust power relations, groups remain unequal in the powers of self-definition and self-determination. Race, class, gender, and other markers of power intersect to produce social institutions that, in turn, construct groups that become defined by these characteristics (Collins, 1998, p. 204).

Furthermore, the focus of that pecking order, aimed generally at indigenous people of color around the world, leaves much for contemplation. Thus, the root cause of structural injustice-particularly that based on race, class and gender-represents a uniquely controversial and thorny subject, in the context of healthcare as in other elements of human interaction.

Research Methods

Research methodology in the context of healthcare fundamentally anchors in the randomized control trials. It is acknowledged that this methodology is powerful and has broad application. The intent herein revolves around augmentation of current approaches rather than refutation. The authors have first-hand perspective in terms of the intention of some pharmaceutical corporations to include more ethnic minorities in clinical trials based on documented differences in the efficacy of some pharmaceuticals based on race, gender, or other demographic. Clearly, this task is quite challenging based on numerical representation, study, budget, and timing among other factors. To reference President Kennedy, the payoff is measured in the forward advance of humanity.

Lau et al. (2016) articulated at least four challenges with including ethnic minorities in RCT. They are paraphrased as:

- Specialized organization for building sampling protocols, participant interactions, and recruitment efforts
- Potential adverse impact on RCT results in terms of useful analytics
- Socio-economic impact (e.g. "SES is a confounding variable with minority status")
- The potential to fortify "deficit views" of underrepresented groups viz "multiethnic" RCTs

Lau et al. (2016) point to the promise of integrating additional methodologies into the research process in addition to significant patient input and consideration in methodology and design.

> A major critique leveled against the use of RCTs as the gold standard for validating treatments for ethnic minorities involves their relevance to the exigencies of "real-world" clinical practice and the broader socioecological context of service delivery. Ethnic minorities have less access to mental health care and the care they do receive is less likely to reflect current best-practices. (USDHHS, 2001); (Lau et al., 2016, p.409).

This is an example of the intention to augment rather than refute an "open trial" with Latinx adults related to Culturally Competent Relaxation Interventions. This was a mental health treatment protocol. The researchers took an allocentric view and used culturally appropriate guided imagery linked to interpersonal connection rather than forcing the "canonical solitary, peaceful imagery."

Lastly, Lau et al. (2016) offer community-based participatory research (CBPR) as a methodological frame to augment hypothesis-driven research. CBPR is posited to drive discovery orientation. They see the benefits as follows:

> CBPR involves collaboration between multiple stakeholders to identify community problems and resources, set research agendas, develop measurement tools, implement study results, and build capacity to for sustaining change (Israel, Eng, Schultz, Parker, & Satcher, 2005). Influenced by principles of action research, CBPR seeks to critically examine

> dynamics of power and privilege in the research partnership, give voice to individuals' lived experiences, dismantle traditional hierarchies of knowledge, and promote community ownership of the research endeavor (Wallerstein & Duran, 2006); (Lau et al., 2016, p.410).

This perspective on methodology integrates quantitative and qualitative ways of knowing. It is in essence grounded in "action research" designed to add texture and meaning to research outcomes. Additionally, this approach impacts the effects of power dynamics and engenders trust. As discussed earlier, putting the interest or cultural proclivities at the center of clinical practice in addition to RCT and other methodologies can positively impact healthcare outcomes.

Healthcare Professional Awareness of Cultural Dimensions

Navigating across cultural differences presents a daunting challenge under the best of circumstances. Having a conscious perspective of both personal and interpersonal elements of dimensions of diversity is a starting point. From the starting point, the healthcare professional embarks on an educational focus to engage difference in the service of mitigating disparities in healthcare outcomes across racial, ethnic, and socio-economic differences. Bao et al. (2007), articulate several points of concern in this space. In describing some of the challenges with cancer screening, they point to physicians' lack of appreciation for the dimensions of diversity represented by the patients they serve-as noted earlier.

These researchers also point to the lack of awareness of physicians serving "different racial/ethnic or socioeconomic backgrounds" in terms of physician communication and interaction.

> Physicians treating patients of different racial/ethnic, or SES backgrounds may differ in their training in physician-patient communication and preventive care. There is evidence that physicians who treat black patients are less likely to be board-certified and more likely to see themselves as unable to provide high-quality health care (Bach et al. 2004). Also, physicians serving in low-income, minority communities are more likely to be graduates of foreign medical schools and less likely to be board certified (Mitchell and Cromwell 1980; Perloff, Kletke, and Neckerman 1986; Bellochs and Carter 1990; Fosset et al. 1990; Mitchell 1991). Ashford et al. (2000) found that inner-city physicians were not as knowledgeable about national guidelines for preventive care as physicians in general. Disparities in the quality of training and knowledge of prevention are likely to result in less frequent discussion of cancer screening among physicians treating patients of racial/ethnic minority and/or low-SES (Bao et al., 2007, p. 953).

This is a very strong observation and correlates well with other researchers' conclusions (e.g., good communication article). The main point centers on awareness and insurance of understanding of key elements associated with inclusive and equitable engagement between healthcare professionals and patients.

Issues of Trust

Many of the issues of disparities in outcomes combined with the issues of navigating cultural differences, and not the least, historical issues of "Medical Apartheid" combine to create a more or less intense feeling of mistrust. The construct articulated by Maister et al. (2004) regarding trust provides a powerful lens for reviewing the subject in the healthcare context. These authors describe trust as the sum of credibility, reliability, and intimacy divided by self-interest. Credibility is the sense that what you articulate has veracity. Reliability is the sense of keeping one's word. Intimacy is the sense of familiarity. Self-interest speaks to the idea of working for the greater good.

In terms of the healthcare interaction across the dimensions of diversity, there are and continue to be concerns related to trust. Based on the brief literature review, concerns about credibility, intimacy, and self-interest (connected to the trust equation noted above) seem to manifest most. An elementary example related to credibility is the oximeter issue discussed earlier in this article. Many people depended upon an accurate reading of blood oxygen levels to determine the need for more acute care. For a person of color to have an inaccurate reading as a function of the design of the medical device represents a failure of the system, either benign or otherwise, it is neglect. The oximeter is a contemporary example.

This article has provided a broad discussion of the issue of intimacy between the healthcare community and people of different racial/ethnic and socio-economic backgrounds as well as gender. The hallmark of this issue lies in cultural competency and a sense of cultural humility on the part of the researcher. Song et al. (2014) noted that when patients and physicians share a common racial background, patients rated their visits as more participatory. To be clear, other factors play into the notion of intimacy. Those factors have been articulated as dimensions of diversity (e.g., education, gender, generational, etc.).

Self-interest is the last consideration. This issue revolves around the tension among and between the healthcare professional, the healthcare institution, the pharmaceutical company, and or medical device company. This concern transcends many racial/ethnic, socioeconomic, or gender boundaries. The profit motive, the prestige motive, and the ego-centric motive are all elements of self-interest that impact the level of trust. Here there is a thin barrier of ethical standards that must be fortified in the interest of the common good--the patient. A clear element of mitigation in the context of healthcare disparities is awareness, transformed into understanding and empathy, fused with action research. This combination of items ought to inform curriculum and educational experiences across the spectrum of healthcare mechanisms.

The NIH among other institutions is recognizing at an increasing level the importance of leveraging awareness of disparities in healthcare outcomes. As the country seems poised to take a new direction regarding diversity, equity, and inclusion, due consideration must be given to the mitigation of healthcare disparities. Specifically, the nation is becoming more diverse along a number of demographic axes. Fundamentally, race, gender, and socioeconomic factors can impact healthcare outcomes.

Implications and Conclusions

The legacy of healthcare disparities pervades both historic and contemporary contexts at all levels of the healthcare system and the reach and impact of these disparities cannot be underestimated. Although there is pain on all sides of these issues, enduring the short-term growing pains leads to long-term victories across multiple fronts that address many of these hang-ups: study costs, increasing study participant diversity, communications, research team composition, expanding the scope of outcomes being studied, etc. Many of these hurdles are being addressed as recognition for the need for interdisciplinary research permeates all STEM fields. As time has moved on, even within STEM fields, there is increasing recognition for the need for interdisciplinary research. Today, on a research team, one can find a software engineer, a mathematician, and a physician working to solve the same problem. As we become more conscious of the benefits of intra-disciplinary collaboration, we hope to see similar understanding for the importance of inter-disciplinary collaboration: It must be kept in mind that the consequences of this research and its conclusions will be endured by other human beings, particularly those doomed to dwell within the lower socioeconomic castes. Cross-pollination with fields within social sciences and humanities facilitates more complete exploration of research questions and includes more investigation of what happens outside of the clinic.

Failure to diversity perspectives within the research team led us to a place that limits the scope of research questions to be explored. This debilitates researchers' and clinicians' ability to create a fulsome view of problems being studied and creates redundant solutions to complex clinical issues that do not exercise any meaningful improvement to the overall condition of the population; and even less so for those already underserved members of society. The source of this quandary links to historic disdain for those deemed less socially valuable and erroneously presumed separation of clinical outcomes and life outside of the doctor's office.

Without these considerations well upstream of the educational curriculum during the research and clinical practice which informs the curriculum, healthcare professionals broadly will lack awareness and sensitivity to practice across differences. The authors' experience with the manifestations of the current ideological zeitgeist ranges across the commercial and academic research spaces in STEM, social science, and humanities genres of study. In all spaces, minority groups were rarely adequately represented on any level of the study construction. When the topic of disparities is broached, discussions are often superficial and presented as a charcuterie board of topics rather than a robust meaningful exploration of cause and effect. The social or structural determinants of these disparities is therefore not covered in a way that leaves students learning about these disparities without appropriate context. This leaves the curriculum without mention of the cultural implications of practicing across differences.

Special Attribution

The above photograph is that of former President Bill Clinton greeting a survivor of the Tuskegee Syphilis Study. It is the 1997 artistry of Sharon Farmer. A White House photograph, it is in the public domain per: https://commons.wikimedia.org/wiki/File:President_Bill_Clinton_greets_a_survivor_of_the_Tuskegee_Syphilis_Study_on_African-American_men.jpg

References

Arday, S. L., Arday, D. R., Monroe, S., & Zhang, J. (2000). HCFA's Racial and Ethnic Data: Current Accuracy and Recent Improvements. *Health Care Financing Review, 21*(4), 107. Business Source Premier.

Bao, Y., Fox, S. A., & Escarce, J. J. (2007). Socioeconomic and Racial/Ethnic Differences in the Discussion of Cancer Screening: "Between-" versus "Within-" Physician Differences. *Health Services Research, 42*(3p1), 950–970. https://doi.org/10.1111/j.1475-6773.2006.00638.x

Gans, H. J. (2005). Race as Class. *American Sociological Association, 4*(4), 17–21.

Hill Collins, P. (1998). *Fighting words: Black women and the search for justice*. Minneapolis. University of Minnesota Press.

Kuhn, T. S. (2012). *The Structure of Scientific Revolutions* (Fourth edition). Chicago ; London. The University of Chicago Press.

Lau, A. S., Chang, D. F., & Okazaki, S. (2016). Methodological challenges in treatment outcome research with ethnic minorities. In A. E. Kazdin (Ed.), *Methodological issues and strategies in clinical research* (4th ed.). (pp. 403–413). American Psychological Association. https://doi.org/10.1037/14805-026

Lynch, C. P., Gebregziabher, M., Axon, R. N., Hunt, K. E., Payne, E., & Egede, L. E. (2015). Geographic and Racial/Ethnic Variations in Patterns of Multimorbidity Burden in Patients with Type 2 Diabetes. *Journal of General Internal Medicine, 30*(1), 25–32. https://doi.org/10.1007/s11606-014-2990-y

Maister, D. H., Green, C. H., & Galford, R. M. (2004). *The Trusted Advisor* (First Free Press paperback ed). New York. Free Press.

Nobles, W. W., Goddard, L. L., & Cavil, W. E. (1985). *The Km Ebit Husia: Authoritative Utterances of Exceptional Insight for the Black Family*. Oakland, Calif. Institute for the Advanced Study of Black Family Life and Culture.

Ore, T. E. (2014). *The Social Construction of Difference and Inequality: Race, Class, Gender, and Sexuality* (Sixth edition). New York, NY. McGraw-Hill.

Razzaq, J., Townsend, T., & Pisapia, J. (2013). Towards an Understanding of Interdisciplinarity: The Case of a British University. *Issues in Interdisciplinary Studies*, 31, 149–173. eric.

Repko, A. F., & Szostak, R. (2017). *Interdisciplinary Research: Process and Theory* (Third edition). Los Angeles. Sage.

Song, L., Weaver, M. A., Chen, R. C., Bensen, J. T., Fontham, E., Mohler, J. L., Mishel, M., Godley, P. A., & Sleath, B. (2014). Associations between patient-provider communication and socio-cultural factors in prostate cancer patients: A cross-sectional evaluation of racial differences. *Patient Education and Counseling, 97*(3), 339–346. MEDLINE. https://doi.org/10.1016/j.pec.2014.08.019

Space.com. (2011, May 25). May 25, 1961: JFK's Moon Shot Speech to Congress. Space.Com. https://www.space.com/11772-president-kennedy-historic-speech-moon-space.html

Stevens, G. D. (2002). Racial and ethnic disparities in the quality of primary care for children [Ph.D., The Johns Hopkins University]. In ProQuest Dissertations and Theses (305517767). Ann Arbor. ProQuest Dissertations & Theses Global. http://proxy.myunion.edu/login/?url=https://www.proquest.com/dissertations-theses/racial-ethnic-disparities-quality-primary-care/docview/305517767/se-2?accountid=14436

Stevens, G. D., & Shi, L. (2002). Racial and ethnic disparities in the quality of primary care for children. *The Journal of Family Practice, 51*(6), 573. MEDLINE.

Thonney, T., & Montgomery, J. C. (2019). Defining Critical Thinking Across Disciplines: An Analysis of Community College Faculty Perspectives. *College Teaching, 67*(3), 169–176. https://doi.org/10.1080/87567555.2019.1579700

Torraco, R. J. (2005). Writing Integrative Literature Reviews: Guidelines and Examples. *Human Resource Development Review, 4*(3), 356–367. https://doi.org/10.1177/1534484305278283

Valbuena, V. S. M., Barbaro, R. P., Claar, D., Valley, T. S., Dickson, R. P., Gay, S. E., Sjoding, M. W., & Iwashyna, T. J. (2022). Racial Bias in Pulse Oximetry Measurement Among Patients About to Undergo Extracorporeal Membrane Oxygenation in 2019-2020: A Retrospective Cohort Study. *Chest, 161*(4), 971–978. ScienceDirect.

Valdovinos, E. M., Niedzwiecki, M. J., Guo, J., & Hsia, R. Y. (2020). The association of Medicaid expansion and racial/ethnic inequities in access, treatment, and outcomes for patients with acute myocardial infarction. *PLOS ONE, 15*(11), e0241785. https://doi.org/10.1371/journal.pone.0241785

Washington, E. T. (2018). *Establishing the Necessity for Ethnic Markers in Forensic Odontology*. American Academy of Forensic Sciences, Seattle, Washington.

Washington, H. A. (2006). *Medical apartheid: The dark history of medical experimentation on Black Americans from colonial times to the present* (1st pbk. ed). New York. Harlem Moon.

PROFILES IN COURAGE

From Army Private to Navy Vice Admiral: Honoring the Life of Vice Admiral John M. Mateczun 1946-2022

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"We were sent to clear a road where . . . a truck had hit a mine. . . . I actually found a mine in the middle of the highway. We had to render it safe. . . . It was basically [an] explosive they [Viet Cong] had dug out of one of our bombs--a 25-pound chunk of explosive and the fusing was a C-ration can. They had wired a battery to it with a contact at one end and a contact at the other end, so when a truck ran over the can, it would bring the contacts together and act as a fuse. It was fairly primitive but effective. My teammate was holding the wires coming out of the C-ration can fusing device. He put his wire clippers over them and I found myself saying, 'Stop!' What he had been about to do was cut both wires at the same time, which would have shorted the battery and triggered the device. You cut one wire at a time! Later I thought, well, it was a good thing that my brain somehow did that. I was still alive"

— John Mateczun
2019 Oral History

* * *

Defusing landmines and shells was an unlikely beginning to a military career that would span 46 years and take John Mateczun from Army private to Navy vice admiral. During my own career as Historian of the Navy Medical Department, I was privileged to spend professional time with John Mateczun when he served as Acting Surgeon General of the Navy in 2005. I distinctly remember one conversation I had with him when he concentrated on his Vietnam experience serving in the Army as an enlisted explosive ordnance disposal (EOD) technician. Deactivating mines and unexploded artillery shells is a job that definitely requires focused attention, or as John said in his oral history, "coming to trust intuition in dangerous circumstances." Quite an understatement.

What fascinated me most about the Admiral's highly unusual career was the circuitous path he took that eventually encompassed four military services: Air Force, Army, Navy, and Marine Corps. Yet despite his high-ranking leadership positions, John Mateczun came across as understated and introspective, certainly not a "backslapper." I always sensed there was so much more to this extraordinary man than what I was seeing. He had built up a seemingly inner personal wall I couldn't quite penetrate. I wanted to get to know him better, but with all his commitments as a senior officer and physician, I never had the opportunity to dig deeper. And I regret that I didn't make a greater effort to try to understand this complex and very remarkable man.

John Mateczun: His Beginnings

John Mateczun was born, raised, and educated in New Mexico, a state not noted for its Navy culture. On his mother's side, he was descended from pioneers of Irish heritage who settled in New Mexico as homesteaders in the late 19th century. John's paternal grandfather had emigrated from Lithuania and settled in Chicago. The name Mateczun (pronounced "Mattison"), according to family lore, was anglicized from "Mataciunas," most likely when John's grandfather entered the U.S. through Ellis Island. John's father, Alfred, a college graduate and a skilled welder, moved to Albuquerque where he met Margaret Costello. They married on the eve of World War II.

World War II affected the Mateczuns as it did everyone else either in uniform or on the home front. John's father, already 40, enlisted in the Navy after Pearl Harbor, brought his welding talents to the Seabees, and helped construct bases in the South Pacific. His mother and her three sisters moved from Albuquerque to California to seek work in the wartime aircraft industry. Her three sisters worked shifts turning out airplanes while Margaret kept house for them and cared for her young son, Alfred. The Mateczuns and other members of the family survived as a unit until the war ended and returned to New Mexico. John was born in 1946 after his father was discharged from the Navy. Alfred senior, who had already been to college, took advantage of the GI Bill to procure a doctorate in education. He then taught industrial arts with welding as his specialty, and eventually became a school principal and education administrator until he retired.

John Mateczun attended high school in Albuquerque and participated in football, basketball, and track. When he graduated in 1964, his options seemed limited. As he put it, "This was an environment where there wasn't a lot of money to pay tuition. So I tended to think about opportunities for higher education in a more limited way. The traditional way out of a small town was through education via a potential sports scholarship or joining the military" (Mateczun, 2019).

Because a knee injury put the sports route out of reach, the military was John's next option. With his father a veteran and his older brother, Alfred, having already attended the Air Force Academy in Colorado Springs, military service "was part of the context of our life" (Mateczun, 2019). With his excellent academic record, John followed in his brother's footsteps. He was nominated and accepted into what was the youngest of the service academies, the Air Force Academy, barely a decade old.

But an Air Force career was not to be. After his freshman year, John applied the brakes. An engineering-based aerospace career was really not what he had in mind, and engineering was the Academy's main focus. And with the Vietnam War simmering but not yet at a boil, John Mateczun wanted to see action before that conflict ended. He feared the end of that distant war would happen before he graduated from the Air Force Academy. "Combat was seen as the real test of proving yourself, of being initiated into the American inner sanctum, and being accepted culturally by all the older veterans" (Mateczun, 2019).

Private Mateczun: Soldier

John Mateczun joined the Army in 1966 to prove himself in time of war. But the other reason was to take advantage of GI Bill benefits so he could eventually finish college. He ended up in the Ordnance Corps and was soon deployed to Vietnam. Ironically, his brother, then an Air Force aviator, also received orders to the battle zone at the very same time, flying reconnaissance missions out of Tan Son Nhut airbase near Saigon. The troop buildup was already in progress, and the January 1968 Tet Offensive was just months away.

John was stationed at Cu Chi near Saigon. Unknown to him and the Army at that point was what lay beneath them. The Viet Cong had dug a network of tunnels to house weapons, food, medical supplies, communications equipment, and even hospitals. Many times during the Tet Offensive, the base came under fire. "Close to a quarter of our base camp was destroyed in rocket attacks" (Mateczun, 2019).

While at Cu Chi, John worked with several EOD personnel and became intrigued by their mission. He noted that these men had earned a great deal of respect from other Army personnel. But at the same time, many thought those technicians, the ones who actually defused mines and booby traps for a living, were out of their minds for the chances they took. But bomb disposal was just the kind of dangerous challenge John craved. Not surprisingly, he volunteered for EOD training shortly after the Tet Offensive, which thereby extended his enlistment. He was then assigned to the Fifth EOD Detachment in Okinawa, deployed to Thailand, and then again to Okinawa where he volunteered for another tour in Vietnam.

John Mateczun was discharged in 1970 with the rank of staff sergeant and having earned a Bronze Star. But he recalled, "I had it in my head that if they were going to want me back in the military again, they were going to have to drag me there in chains. Of course, that's not the way it worked out" (Mateczun, 2019).

A civilian once again, John attended the University of New Mexico on the GI Bill. "The experience in Vietnam left me with a real thirst for things that I hadn't known about before I went--in psychology and history and all of the other vectors that go into our journey in life" (Mateczun, 2019).

When John graduated in 1973, he had already set his sights on his next goal--becoming a physician. But when he applied to the University of New Mexico School of Medicine, he learned that some of the faculty members were suspicious, not because he hadn't majored in chemistry or biology but because of his previous military background. Divisiveness over an unpopular war, as well as lingering distrust of Vietnam veterans, was common at the time.

While John was still in medical school and growing short on funds, a Navy recruiter entered the picture. Following a tour of the Naval Hospital in Oakland, California, he and several of his fellow med school students, also veterans, entered the Navy's Senior Medical Student Program. Ironically, one of those veterans was his brother Al, who had resigned from the Air Force when that service refused to support his own application to medical school. Despite the rebuff, Al plowed ahead, joining his younger brother in earning a medical degree. Now both Mateczun brothers were Navy medical officers.

Lieutenant Mateczun: Navy Physician

A full-fledged member of the Navy Medical Corps, John Mateczun did his internship and psychiatry residency at Naval Hospital Oakland, also earning a master's degree in public health from the University of California, Berkeley. Even as he added knowledge and other medical skills to his inventory, psychiatry fascinated him most.

In 1982, he received orders to the Marine Corps as Division Psychiatrist and Assistant Division Surgeon, 3rd Marine Division on Okinawa. This assignment added yet a fourth military service to John Mateczun's still young career. That one-year tour with the Marines gave him a leg up when he returned. With his enlisted background, he stated, "I knew a lot more about where enlisted people, and operational people in general, were coming from than anybody else in the department" (Mateczun, 2019). That assignment with the Marines would not be his last.

Over the next several years, Mateczun served in many Navy medical facilities, including the National Naval Medical Center in Bethesda, Maryland. As he moved up in the Navy Medical Department, more responsibility naturally came his way. One duty was supervising staff in training with all its accompanying nightmares, such as overseeing "all those inexperienced residents in the middle of the night to decide if somebody's suicidal or not, and if you can send them back to their duty station, or their home, or wherever it is you're going to send them. That can be terrifying in and of itself" (Mateczun, 2019).

By 1987, John Mateczun was Chairman of the Department of Psychiatry at Naval Hospital Portsmouth, Virginia, located near the headquarters of the Atlantic Fleet. In that role, he dealt with several incidents in which personnel required mental health interventions. One such instance was a tragic explosion and fire in April 1988 aboard the submarine USS *Bonefish*, which took three lives and injured many more crewmen. In April 1989, a turret explosion aboard the battleship USS *Iowa* resulted in the deaths of 47 crewmen. On John's watch, Special Psychiatric Rapid Intervention teams, headquartered at Portsmouth, provided much needed mental health support to the survivors of the *Bonefish* tragedy and the crewmen of the Iowa disaster.

John Mateczun recognized early on that he couldn't simply rely on his medical degree. He was on an endless quest to develop expertise in order to become a more effective physician. In court martial proceedings, Navy psychiatrists are often called upon as expert witnesses to testify as to a defendant's mental responsibility. This merger of psychiatry and military law could be confusing to the uninitiated, but it was not in John Mateczun's nature to be unprepared. The solution: a law degree. After taking courses in night school at Georgetown University Law Center, he earned his law degree in 1988. Shortly thereafter, he became board certified in forensic psychiatry, a subspeciality of psychiatry related to criminology, which connects law and psychiatry. His legal training also had a side benefit. It gave him the skill "to understand a lot of surrounding issues, because you can translate between organizational languages and sometimes cultures. . . . For me, it became an asset in dealing within organizations" (Mateczun, 2019).

Rear Admiral Mateczun: Consultant, Special Assistant, and Deputy Surgeon General

Assignments and titles that followed his tour at Portsmouth are too many to list, but John Mateczun quickly became a recognized leader within the Navy Medical Department. He could handle any task thrust upon him. During the Desert Storm phase of the Persian Gulf War (January-February 1991), he deployed to Saudi Arabia as a special consultant to the Marine Forces Central Command. His mission was to assess the organization and quality of in-theater mental health support for the Marines and Navy personnel. He recognized that anticipated amphibious operations required coordination between the Navy and Marine Corps staffs. Members of those staffs "did not agree how to split up the mental health mission. . . . It was chaotic; it was hectic. Had I not had combat experience, it would have been much more daunting" (Mateczun, 2019). John Mateczun's management skills and subtle diplomatic touch resolved the issue. Yet through it all, the perceptive psychiatrist was not oblivious to those who would provide that mental health support. As he later pointed out, "Who cares for the caregivers?" (Mateczun, 2019).

John Mateczun's organizational prowess was now widely recognized even outside the Navy Medical Department. He found his job completely transformed from clinician to full-time administrator, often playing the role of "special assistant." He served as Special Assistant to the Assistant Secretary of Defense for Health Affairs and Chief Medical Officer for the TRICARE Management Activity. In 2001, while serving as the Joint Staff Surgeon in the Office of the Joint Chiefs of Staff, he witnessed firsthand the September 11th attack on the Pentagon and its aftermath. He joined other medical personnel in treating some of the initial casualties brought to the DiLorenzo Pentagon Health Clinic, then helped evacuate them to other local medical facilities.

John Mateczun, a one-star rear admiral by 2003, then did a stint as Commanding Officer of the Naval Medical Center San Diego. He then returned to Washington to serve at the Bureau of Medicine and Surgery (BUMED) as Deputy Surgeon General from 2005 to 2007. For several months in 2005, he oversaw a major reorganization and led the Bureau as Acting Surgeon General. His steady, competent hand at the helm did not go unnoticed by those who worked at BUMED at that time. But soon enough, the recently promoted two-star Rear Admiral's talents were needed elsewhere.

Base Realignment and Closure (BRAC) was about to happen and Rear Admiral John Mateczun would play an important role. "Base Realignment and Closure" was a term that struck terror in the hearts of many who worked in the Department of Defense, either as military personnel or civilians. Twenty-two major military bases were to be shuttered with the enlarging or shrinking (realignment) of another 33 bases. The Secretary of Defense was required to begin carrying out the recommendations by the fall of 2007 and complete the process no later than the fall of 2011.

Vice Admiral Mateczun: Commander, Joint Task Force

In response to BRAC, Rear Admiral John Mateczun suddenly found himself the newly appointed Commander of Joint Task Force National Capital Region for medical facilities. His mission, perhaps the most complex and trying in his military career, seemed mind-boggling. He was tasked with consolidating four inpatient military hospitals--Walter Reed Army Medical Center, the National Naval Medical Center, Malcolm Grow Air Force Hospital, and Dewitt Army Hospital--into two inpatient facilities. Walter Reed and the National Naval Medical Center combined to become the "Walter Reed National Military Medical Center." Malcolm Grow Air Force Hospital closed as an inpatient facility, and was redesignated the "Malcolm Grow Medical Clinic and Surgery Center." Dewitt Army Hospital became "Fort Belvoir Community Hospital."

In carrying out this seemingly impossible order, John Mateczun had to deal with the Secretary of Defense, Assistant Secretaries of Defense, Secretaries of the Army, Navy, and Air Force, the governors of Maryland and Virginia and their staffs, senators, congressman, and even local politicians. In recognition of the complexity of his mission, John Mateczun was awarded his third star. Up to this point, the only Navy physicians, that is, those who could attain this active duty rank, were Surgeons General of the Navy.

This herculean undertaking was contentious and often aggravating, with competing interests, meddling by individual members of Congress, and interservice rivalries trying his patience on a daily basis. During this time, his wife, Elizabeth "Betsy" Holmes, recalls, "He was respected by people from all the services because he wasn't committed to just having it be Navy. Although he was accountable not to the services but to the Department of Defense and Congress, he spent years being mistreated, harassed, challenged, and threatened. One CNO [Chief of Naval Operations] told him, 'If I could fire you, I would.' Every night, John would come home exhausted and I'd ask him, 'Have you been fired yet?' And he would laugh" (Holmes, 2023).

After a four-year ordeal, all newly merged hospitals were up and running, ready to serve military personnel and their families in the National Capital Region for medical facilities. John Mateczun had accomplished his mission, and, after 44 years serving the nation, he was ready to retire and begin the next chapter in his life as a civilian.

John Mateczun's retirement was short-lived. From 2013 to 2019, he worked for United Healthcare Military & Veterans Services, a managed care support contractor. He served first as the company's chief medical officer and then as president and CEO.

Travels with John

Then there was John the man--not John the son, the husband, the father, or the Admiral. John Mateczun was a multifaceted "renaissance man," who loved theater, opera, music, literature, the humanities, and sports. "Those interests made him who he was," mused his wife, herself a retired naval officer and psychologist. The Kennedy Center for the Performing Arts and Baltimore's Center Stage were frequent destinations. And although his operatic interests were many, Betsy pointed out that he devoured Wagner's works most of all. "John went through the four operas of Wagner's Ring Cycle at least three times, going by train to New York's Metropolitan Opera for each performance." He was on a relentless quest to unravel the sometimes heavy and overarching complexity of Wagner's operas. "You really have to love Wagner to do this," she said. "In his case, it wasn't really a love but a commitment."

John Mateczun also had a knack of combining travel with literature. When he, Betsy, and their three children traveled, those vacations often were literature-inspired pilgrimages. "He created everything for us so it could be enjoyable but valuable in terms of learning. For a trip to Cuba, he arranged everything for a Hemingway theme," Betsy called to mind. Family members prepared by reading *The Old Man and the Sea*. She added, once there, "We even went to the bars Hemingway frequented and the writer's home near Havana where he wrote several of his best-known novels." A subsequent vacation to Ireland likewise became a James Joyce experience. In Rome, John arranged a private tour of the Colosseum, the Vatican, and the Sistine Chapel.

John also had a spiritual side. When Betsy was stationed in Rota, Spain, she learned about St. James and the Camino de Santiago, the pilgrimage through northwestern Spain leading to the shrine of Saint James in the Cathedral of Santiago de Compostela in Galicia. She made the 500-mile-long trek with her sister in 2006. In the intervening years, John also developed an interest in doing the walk but never mentioned it to his wife. As he neared retirement in 2012, he declared his intention to walk the Camino as a rite of passage or transition from the Navy. Accompanied by daughter, Laura, he completed the pilgrimage, a physical and spiritual experience that enhanced the bond between father and daughter.

Betsy and John later compared their experiences, each teasing the other. "Well, you didn't have it as hard as I did. You let someone else carry your bag? I carried my bag the whole time!"

"I got blisters and you didn't."

"I got bitten by bedbugs and you didn't."

But beyond the good-natured repartee, both partners could not deny the enhanced internal spirituality they each experienced. Together they shared this religious experience walking the Camino de Santiago, even though they did so at different times.

Vice Admiral John Mateczun passed away on November 7, 2022, after a long illness. By all measure, his "soup to nuts" career from U.S. Army private to U.S. Navy vice admiral was extraordinary in what he achieved along the way. Always focused on the task at hand, whether it was cautiously defusing a landmine, treating a patient with genuine compassion, providing sage advice to his superiors, commanding a naval hospital, or leading his family on a literary tour, he accomplished it all competently in his quiet, efficient way. The legacy this great man left his family and the nation speaks for itself.

References

Holmes, Elizabeth, Captain, MSC, USN (ret.). (2023, February 23). Interview by Jan K. Herman.

Mateczun, John, Vice Admiral, MC, USN (ret.). (2019, October 18, November 13, and December 12). Oral History by André B. Sobocinski, Bureau of Medicine and Surgery.

Author Note

The opinions expressed in this special biography are those of the author alone. The author has no conflicts of interest.

Special Notation

The photograph of Dr. Mateczun at the beginning of this special biography is an adaptation of the original artistry of Richard L. Oasen. It is a photograph from the US Navy and is in the public domain per: https://commons.wikimedia.org/wiki/Category:John_M._Mateczun#/media/File:Rear_Admiral_(lower_half)_John_M._Mateczun.jpg

THE CRITICS CHOICE


EMMETT L. TILL
IN LOVING MEMORY
JULY 25, 1941
AUG. 28, 1955

Film Review

Till

A Film by Chinonye Chukwu
2022

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Author Note

The contents of this manuscript do not reflect the policy or opinions of the author's university or the agencies which the author serves. The author has no financial conflicts of interest.

Introduction

Sixty-seven years ago, Emmett Till, a Black 14-year-old teenager, was brutally lynched in Mississippi for speaking to a White woman, Carolyn Bryant. His body was carelessly dumped in a river and went missing for three days before being found. When the body was discovered, Emmett's uncle, Moses Wright, at first could not identify it due to how swollen Emmett's features were. His face was unrecognizable. An initialed ring that Emmett wore was the only way his body could be identified.

No mother would ever wish to face the same adversity as Mamie Till-Mobley, Emmett's mother. Through her bravery, Mamie pushed America toward civil rights and voter rights for Black Americans. Mamie and the National Association for the Advancement of Colored People (NAACP) brought much awareness to Emmett's case, leading to a trial in Mississippi against the Bryant brothers for lynching Emmett. Unfortunately, they were found not guilty. Meanwhile, Carolyn Bryant is still alive today and has not faced justice. However, Mamie's actions were hardly futile. Just two years after Emmett's lynching, the Civil Rights Act passed in 1957. Although much belated, 67 years after the lynching, Congress passed the Emmett Till Anti-lynching Act, making lynching a federal hate crime.

While the story of Emmett Till is one that may make some people uncomfortable, *Till* (2022) reminds us how deeply rooted racism has been in America. Discrimination has plagued not only the minds of people, but also the sacred American justice system. The fact that the unsensible lynching of a 14-year-old only happened 67 years ago is terrifying. Additionally, it is a stark reminder of the cruel and brutal violence amongst Americans that occurred solely due to skin color. With that in mind, it is crucial that Americans remember the stains of one's history, and *Till* (2022) directed by Chinonye Chukwu and written by Keith Beauchamp, is a poignant reminder of these stains. Deborah Watts, Emmett's cousin, applauded the film when she said, "A story that Mamie Till-Mobley wanted told back in 1955 is finally going to be told to the world."

Till (2022) is the story of a grieving mother who is cheated of a son and justice. Mamie Till-Mobley never wanted to be a figure for social justice, but her tenacity led her to be an instrumental figure during the Civil Rights Movement. *Till* pays respect to her actions and the brave journey she set upon, but the film also reminds us about the importance of legislation and fair trials that must never hinder a human's rights and freedom. If America had had laws to protect Emmett, he might still be alive today. To look more closely at *Till's* message, the film will be deconstructed for further analysis.

Film Summary

The film opens with Mamie (Danielle Deadwyler) and Emmett Till (Jalyn Hall) listening to music and smiling while enjoying a mid-day drive. At first glance, this may seem like a wholesome interaction between a mother and her son, but as the scene continues, the music becomes distorted, and Mamie's face conveys worry. They walk into a clothing store, and we see the stark reminders of a pre-civil rights America. Mamie and Emmett are the only Black people in the store, and the White customers glance at them as though they are aliens from another planet. Almost immediately, a store employee confronts Mamie and informs her that there are also shoes in the basement. Mamie replies, "Do your other customers know about those shoes?" Emmett then calls for his mother and asks if she can buy him a wallet. At first, his mother denies him the wallet, but he begs that he needs a new fancy wallet for his trip to Mississippi.

At Mamie's home in Chicago, it is revealed that Emmett is planning a trip to Mississippi with his cousins to pick cotton. Mamie expresses her disapproval, saying that Mississippi is too dangerous for a Black youth. She thinks he would be better off in Chicago. Alma Carthan (Whoopi Goldberg), Mamie's mother, assures Mamie that her son will be fine. Later that night, Emmett puts a polaroid photo of an actress into his new wallet. Mamie walks into his room, and Emmett asks if he can wear his father's ring on the vacation. Cautious at first, Mamie eventually gives in and allows her son to wear it. She tells Emmett to be careful in Mississippi, "Be small down there, Bo." Little does Mamie know that his father's ring would be significant in later identifying her son's disfigured body. The film follows Emmett and Mamie to a train station where his uncle, Moses Wright (John Douglas Thompson) nicknamed "preacher," and his cousins meet them. Joyous music accompanies smiles and happy faces. Mamie and Emmett share one last hug, and Mamie tells her son one more time to be "extra careful." As the train departs the station, an accompanying bittersweet tune becomes abruptly distorted, transitioning into a screeching violin. The camera focuses on Mamie who, while watching the train depart, expresses panic and distress, almost as though she is reliving a choice she could have altered.

After the train scene, the film displays the title card, "*Till*," and the film then focuses on Emmett's time in Money, Mississippi. The story takes its audience to a field where Emmett and his cousins are picking cotton. It is evident Emmett is not like all the other boys. He pulls pranks and rebels against the work. Emmett and his cousins later go to a convenience store where all the customers are Black. As Emmett browses around the shop, he meets the shop keeper, Carolyn Bryant (Haley Bennett). Emmett is starstruck by Carolyn and compares her to the actress in his wallet. Emmett's nephew notices Carolyn's discomfort and gets Emmett to leave. All Emmett's cousins quickly exit the store and enter their respective cars as Carolyn Bryant grabs a gun and aims it at Emmett. Later the four boys attend an all-Black party. After much deliberation, they decide that "no one needs to know."

Later that night, Carolyn Bryant's brothers, Roy Bryant (Sean Michael Weber) and his half-brother JW Milam (Eric Whitten), approach Moses' home. They barge into the house looking for "the boy that did the talking in Money." They eventually find Emmett and abduct him at gunpoint, all the while patronizing him by calling him "boy." Although Emmett's uncle and aunt beg the Bryant brothers to let go of Emmett and cry that he is a young boy, the brothers insist that Emmitt is going to learn a lesson. One of the brothers aims his gun at Moses Wright, Emmett's uncle, as he follows the brothers outside. His captors throw Emmett in the back of a truck, where other Black farmhands employed by the Bryant family pin him down.

Once the Bryant brothers depart the farmhouse with Emmett, the film depicts what occurs later that night. The camera pans across a dwelling in the fields, the house lights illuminating the dark night. It is implied that the building is the Bryant's farmhouse, and while it is not explicitly shown, whipping, pleas for help, and laughter are audible. Emmett cries for forgiveness and for mercy, but the brothers show no sympathy. They continue to torture the young boy in their farmhouse for simply speaking to their sister. While the lynching is not actually shown, hearing Emmett's yelps and cries for help could sink anyone's heart, especially when one realizes that this atrocity occurred in relatively recent times. Not illustrating the violence was a very intentional decision by film director Chukwu, who explained, "This story needs to be told in a way that is humanizing, empowering, and necessary. There will be no physical violence against Black people on screen because I'm not interested in relishing in that kind of physical trauma. We're going to begin and end in a place of joy." The choice not to show Emmett being beaten consciously avoids sensationalizing Emmett's killing. Indeed, such a scene would come across as unnecessary and distasteful.

The following morning, Mamie awakens to a phone call from her brother. Mamie's deep anguish is evident as she informs her family that Emmett is missing. Mamie's father is connected to a man named Rayfield Mooty (Kevin Carroll), the Chicago Labor Union leader who connects Mamie with the NAACP. The NAACP assists Mamie in finding the whereabouts of her son through local newspaper articles about Emmett's sudden disappearance. The film shows a montage of newspapers thrown in front of homes, depicting how the news is quickly being spread. Then, the viewer sees Mamie with a large number of friends and family as they anxiously await news about Emmett. Eventually, Mamie's friend enters her home and breaks the news that her son was found dead in the river. The camera records Mamie's reaction--a blank stare from someone unable to digest the tragic news. Mamie then collapses.

Not long after Mamie receives this tragic news, America learns about Emmett's fate. As a White suburban family watches *I Love Lucy*, the show is quickly interrupted by a "Breaking News Bulletin." Emmett Till's murder is the headline news. The film then moves to another scene in which a Black family listens to a radio news broadcast about Emmett's lynching. The radio hosts discuss the possible indictment of the killers.

The film then returns to the Till family. Mamie and her family sit in the living room watching the news. Mamie retreats to the front porch. Rayfield Mooty visits and tries to sell her a plan that would influence lawmakers to pass a bill outlawing lynching because of Emmett's death. Mamie gets upset with Rayfield. At this point, politics are not on her mind. She just wants to see her son.

Much later, Mamie arrives at a train station where many journalists are waiting with their cameras. To keep from passing out, Mamie sits in a wheelchair, accompanied by her father and fiancé. Mamie cries when she sees a giant cargo crate carrying her son, a very uncompassionate way of transporting Emmett's remains. Mamie rushes to the crate, holding onto it and begging God for mercy. The pain-ridden mourning is accompanied by journalists taking photos of the distraught mother. If one were to search Google "Mamie Till at train station," actual photos of this scene can be found.

Later, Mamie is at a funeral home with her deceased son, accompanied by her fiancé, Gene Mobley (Sean Patrick Thomas) and the funeral director. After requesting she be alone with her son, she removes the covers concealing her child. Emmett's body is almost without skin. His muscles and veins are exposed, and his limbs are swollen. As Mamie traces her son's enlarged legs, we can see that they are bigger than her hands. She later returns to Gene and asks that he get Emmett's favorite Christmas suit. She emphasizes, "It's how he'd like to be seen." Gene questions Mamie, "Seen?" Mamie insists that the whole world needs to see what happened to her son. The funeral director asks if he can clean up the body, but Mamie believes everyone needs to see his body as she did, or else no one will believe her.

Another iconic moment in history is reenacted in the following scene. Mamie and Gene stand near Emmett's corpse before a photographer. Gene holds Mamie, and Mamie stares at her son while Gene looks into the camera. Below them is Emmett's body in a suit, his swollen head is most visible. This photo was taken for the cover of Black-owned *Jet* magazine. *Till* recreates the photo, but one can see the original picture by doing a Google search of "Emmett Till Photo." As the photo is taken, a radio report gives news of an open casket funeral for Emmett.

There are reactions from the general public. Some believe Mamie is brave, while others think it is a "freak show." Mamie gets her say in the radio interview, stating she wants to see Carolyn Bryant and those involved prosecuted, "I won't stop until that happens, even if I have to go down to Money, Mississippi myself." Once more, we see the news quickly spread throughout America about the open casket funeral and the call for prosecution of the Bryant family. Hundreds of people attend the funeral to convey their condolences and witness for themselves the frightening condition of Emmett's body. The choir sings "*It is Well With my Soul*" as the camera zooms out from Emmett's body in the casket. The film shows thousands of people lined up to the casket to pay their respects. It was reported that 100,000 people attended the funeral (Waller, 2021).

After the funeral, Mamie looks at the newspaper headlines, "2 Men Charged for Murder of Chicago Boy." She is angry that Carolyn Bryant was not charged, but Rayfield reminds her that even indicting two White men is not an easy feat. The NAACP arranges for Mamie to go to Mississippi for the trial, but first she is to meet with Dr. Howard in Mound Bayou, an all-Black town where Black people who are attending the trial are staying for safety.

Dr. Howard (Roger Guenver Smith) is a Black chief surgeon and entrepreneur who founded a successful life insurance company. Dr. Howard founded many businesses in Mound Bayou and works closely with the NAACP. In fact, his mansion is known as the "Black

Command Center" because of the many Black reporters who work in his mansion. These same reporters are also investigating the murder, looking for willing witnesses for the trial.

Mamie and her father are accompanied by NAACP first field secretary Medgar Evers (Tonsin Cole) to the courthouse in Sumner, Mississippi. Sumner is a predominantly White town, and the film makes clear that the setting is vastly different from Chicago. Not surprisingly, Mamie, her father, and Medgar Evers are quickly subjected to discrimination. As White journalists pressure Mamie to make a statement, a White child shoots a fake gun at Mamie to startle her. Furthermore, only Blacks are subjected to a search. Before entering the court room, Mamie and her company are patted down. The scene at the court room does not seem to reflect the gravity of the situation; all the White people happily talk to each other with smiles. In no way does it resemble a trial for the killing of an innocent youth. Again, Mamie faces discrimination as the sheriff patronizes Mamie and her company. While the Whites can sit, the Blacks are made to stand. As the trial begins, early red flags rise when the jurors enter. All the jurors are White. Soon after the jurors enter, the lead prosecutor calls for a recess. Mamie's lawyer objects to the recess, but the objection is quickly overruled. It does not seem the judge will be impartial.

During the recess, Mamie travels to Money, Mississippi, and visits the convenience store where Emmett met Carolyn. Afterwards, she visits Emmett's uncle, Moses Wright. Mamie speaks with Moses' sons, who all beg for her forgiveness and express their regret. As Mamie hugs the boys, she notices a double-barreled shotgun hanging from the wall. Mamie gets angry with Moses, demanding that he explain why he did not defend her son when he had a shotgun. Moses retorts that if he had done anything, his own family would have been hunted down. Furthermore, Moses indicated that he has no plans to testify against the killers: "No Negro in Money has ever spoken out against a White man and lived."

Later, the NAACP sends activists to "convince" Moses and Willie Reed, a farmhand for the Milam family, to testify in court. Among the activists is Ruby Hurley, who knocks on Moses' front door with a revolver. After a chase on foot, Willie Reed gives in, and he agrees to be a witness in court along with Moses. Moses gives a compelling testimony of the events, and even points out J.W. Milam in the court room. Willie Reed then speaks before the court; he gives his account of hearing screaming from the Milam's shed. Despite Willie's account, he is grilled by the lead prosecutor, "Why didn't you cry help? Are you sure that's what you heard?" By the end of his testimony, Willie Reed seems defenseless.

Then the lawyers question Mamie who describes how she knew that the disfigured body was her son. The actress for Mamie, Danielle Deadwyler, gives a beautiful performance. "But these were the same parts of a boy that I nurtured and loved. Nothing and no one could hide him from me. A mother knows." But despite Mamie's beautifully spoken monologue, the prosecution is quick to paint a bad picture of Mamie and her son. The prosecution immediately accuses Mamie and the NAACP of conspiracy when they learn from Mamie that she had an insurance policy for Emmett in the case of accidental death or murder. Then the prosecution accuses Emmett of being more unruly than the average youth. Finally, the prosecutor startles Mamie by showing her a photo of Emmett's lifeless body. Her voice breaks, and she can hardly conceal her emotions. However, Mamie answers every question. Before leaving the witness stand, Mamie says to herself, "They killed my son again." The following night, Mamie stares at the night through her bedroom window. Her reflection reveals a mother who feels defeated.

The next day, Carolyn Bryant testifies in the court room. The testimony seems out of place, as the judge acknowledges her testimony is irrelevant to the case, and the jury is not present in the courtroom. Carolyn Bryant fabricates a story about how she met Emmett on a “dark night.” The lies continue as she describes Emmett sexually assaulting her. Carolyn claims Emmett aggressively pinned her hands behind her back and bent her over as he made sexual comments about her. It becomes clear that the testimony is used to redirect the focus and make Emmett appear malicious. Before Carolyn continues, the camera follows Mamie as she exits the courthouse. Her father asks why she is leaving before the trial is over. Mamie already knows what the verdict will be. She does not want to hear what she already knows. As she is driven away from the courthouse, the radio makes it known that the two Bryant brothers on trial were found not guilty.

After the trial, Mamie gives an eloquent speech before the members of the NAACP in Harlem, New York. Mamie criticizes not only the Mississippi criminal justice system, but also the federal government as they stood “idly by,” doing nothing to bring Emmett’s killers to justice. Mamie continues by criticizing the country: “If this country fails to protect the Black body from hate, America has yet to meet their promise. Either freedom for everyone or freedom fails.” Mamie goes on to say that she never thought she would be an activist for others, but when her son was lynched, it woke her up to the injustices in America, “When something happened to the Negroes in the south, I said ‘well that’s their business not mine.’ Now I know how wrong I was.” Mamie goes on to say that the lynching of a Black person anywhere in the world better be “the business of us all.” This speech truly reveals the change in Mamie through her journey, from a mother with a son to an activist fighting for civil rights.

The final scene shows Mamie coming home after delivering her speech. She removes her jewelry and sits in silence. Years before, the house was more lively with her son’s presence. She plays a tune on her turntable before walking into her son’s room. The dim room gets progressively brighter and changes into a more vibrant yellow color. Mamie’s expression also changes from gloomy to content and smiling, an expression the viewer hasn’t seen since her son was alive. The camera pans from Mamie to another side of the room where Emmett is smiling back at her in silence. The camera moves back to Mamie as she chuckles and smiles. The film ends with a fade to white. Is this symbolic of Mamie and Emmett reuniting in an afterlife, of Mamie believing her son would be proud of her fight, or of Mamie finally feeling acceptance that she did all she could for her son? Chukwu keeps it ambiguous.

What is not ambiguous is the epilogue. It is simple white text on a black background stating what happened to the characters after the events shown in the film. Notably, the epilogue informs the viewer that a year later J.W. Milam and Roy Bryant confessed to killing Emmett Till for $4,000. Before dedicating the film to Mamie Till-Mobley, the epilogue explains, “The Emmett Till Anti-Lynching Act was passed on March 29, 2022, 67 years after Emmett’s murder.” While some may find solace that Emmett Till is remembered through legislation, others may consider it disturbing that it took 67 years for such a basic human right to become law.

Reflection

Till (2022) is not afraid to push boundaries. While the film is a reenactment, and the violence is reproduced, these are real people who suffered from backward ideology, oppression, and a corrupt system. While some may understandably want to avoid viewing *Till* because of the graphic topics and the disturbing imagery of Emmett Till's body, it is crucially important for us to be aware that these events happened just 67 years ago.

Till echoes sentiments about fighting for human rights and encourages us not be complacent when threats to anyone's rights occur. During Mamie Till-Mobley's address in Harlem, she says, "When something happened to the Negroes in the south, I said 'well that's their business not mine.' Now I know how wrong I was." This message about watching discrimination occur on the sidelines is reminiscent of the message of the German Lutheran pastor, Martin Niemöller, when he witnessed the destruction of human rights in Nazi Germany: "First they came for the socialists, and I did not speak out--because I was not a socialist. Then they came for the trade unionists, and I did not speak out--because I was not a trade unionist. Then they came for the Jews, and I did not speak out--because I was not a Jew. Then they came for me--and there was no one left to speak for me."

Till's message is so well-delivered because it does not need to exaggerate the events. Chinonywe Chuku's direction ensured the film was made tastefully and respectfully by avoiding sensationalism and relying on extensive research. Screenwriter Keith Beauchamp is greatly responsible for this research. In fact, Beauchamp is a subject matter expert on the Emmett Till case. Beauchamp interviewed witnesses and accomplices who had never been interviewed and worked closely with Mamie Till-Mobley when he wrote his documentary, *The Untold Story of Emmett Louis Till* (2005). This thorough research is evident throughout the film, as even characters with smaller roles such as Ruby Hurly, Medgar Evers, and Rayfield Mooty make appearances in the film.

Moreover, it requires a talented and conscientious cast to appropriately execute such a sensitive topic, and the cast certainly delivers. Danielle Deadwyler's portrayal of Mamie should especially be applauded. Deadwyler is well suited for this role. She grew up as a volunteer at Martin Luther King Jr.'s Christian Leadership Conference and is a mother who can fully relate to the experience of having conversations about racism with her son as a Black mother. One must wonder if Deadwyler's background helped prepare her to play a mourning mother and passionate activist. Deadwyler had much weight on her shoulders, as not only was her role emotionally tolling but she also held the responsibility of honoring the Till-Mobley family and helping convey generations of grief. As of this writing, there is a lot of social media buzz that Danielle Deadwyler should receive an Oscar award for Best Actress for her role in the film.

It is important that movie-goers who leave the theater after watching *Till* apply what they learn from the film to the real world. Although America has come a long way from Jim Crow, Americans continue to fight for improved fundamental rights like healthcare. When Roe v. Wade was overturned, many Americans felt their rights were suddenly stripped and were concerned if any further rights would be altered. On December 13, 2022, Congress voted on H.R.8404, the Respect for Marriage Act, which protects same-sex and interracial marriage. While the bill was passed, it is startling to think 36 members of Congress voted against the bill and thus threatened the protection of marriage equality. However, outside of the social context, one would argue America has not done enough to ensure the human right to healthcare. According to several studies, medical bills are the number-one cause of U.S. bankruptcies, with up to 62.1% of bankruptcies being caused by medical issues (Amadeo, 2022). Obviously, the human right to healthcare is not being met if Americans are sacrificing a trip to the emergency room for financial reasons.

Today, the United States of America is more progressive socially than it has ever been, and that is thanks to civil rights heroes such as Mamie Till-Mobley. In modern times, when unjustified violence occurs against a nonthreatening man, America is quick to protest such transgressions and be politically active. But *Till* reminds the viewer to never be complacent in protecting human rights. Until the basic needs and rights of every American are protected, as Mamie Till said, "Either freedom for everyone or freedom fails."

References

Amadeo, K. (2022, January 20). Medical bankruptcy and the economy: Do medical bills really devastate America's families? *The Balance.* Retrieved from https://www.thebalancemoney.com/medical-bankruptcy-statistics-4154729

Waller, A. (2021, August 27). Church that hosted Emmett Till's funeral is designated 'endangered.' *The New York Times*. Retrieved from https://www.nytimes.com/2020/09/26/us/emmett-till-church-endangered.html

Emmett Till and his mother, Mamie Till-Mobley

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Book Review

The Light We Carry

By Michelle Obama
Crown Publishing Group
New York City
2022

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Author Note

The insights and views expressed in this review are those of the author and do not reflect official policy of the institutions she serves. The author has no conflicts of interest.

By Way of Introduction

In November 2008, Barack Obama was elected the 44th President of the United States. Within nine weeks the Obama family boxed up their lives in Chicago and moved to Washington, DC to prepare to move into the White House. Michelle not only came along with Barack and their family and possessions, but also brought along her doubts and insecurities about whether she would be adequate for her new position as First Lady. But instead of dwelling on it, Michelle reached into her personal toolbox for the strength and support to carry on.

This book is meant to offer companionship to those entering a phase of uncertainty in their lives. Its purpose is to steady, comfort, and support, and its author is a person who has been there and done that. As the last several years have shown, everything that we have known and taken for granted has changed, and we have all been touched by uncertainty and fear.

It is during these challenging and uncertain times that, instead of asking when will it all end, we need to ask ourselves the following three questions: How can we adapt? What do we need to sustain ourselves and continue? What can we achieve if we all work together?

This is the conversation that Michelle would like to have with us throughout this book. In it she points to the tools that she developed for herself, and that we all have within us to use. She reminds us to stay faithful, be understanding, and continue to do the work.

Summary

The Light We Carry introduces us to Michelle Obama's personal toolbox that she has learned and accumulated during her life. She begins with the concept of "starting small" when we feel overwhelmed with the enormity of a situation. She uses the analogy of learning how to knit. Every knitting project begins with casting a single stitch and then continuing with each stitch until there is a row, a second row and so on until the garment is completed. The same thing can be said about whatever challenge we face. One step at a time, like knitting one stitch at a time, until the task is completed.

As Michelle explains each of her tools, she introduces us to members of her family, such as her father who had multiple sclerosis and had to use a cane for support…or her "Mamaw" who raised two children as a single parent by mending other people's clothes…and of the sacrifices they made so their children's children could have a better life. We see Michelle and her brother Craig sitting on their couch watching *Creature Feature*, a show that played cult monster movies on Saturday nights. In this analogy she introduces us to the concept of facing our fears. What makes us afraid? She also discusses how her brother loved these horror movies although she did not, but she watched them anyway. She suggests that when we are fearful, we look at what is causing us to be afraid and why. Is it change, or the unknown, or is our own safety at risk? When we break down the problem and analyze our fear we are able to coexist with it. As Michelle describes it, if she had let her fear override her, she would have objected to Barack running for president. But she did not, because she knew it was what Barack wanted to do and that he would be a good president.

Michelle encourages us to "start kind" with ourselves. She talks about the husband of a close friend, who every morning looks at himself in the mirror and says "Heeey, Buddy!" as his daily greeting to himself. Michelle, herself, deliberately begins each new day by making a positive thought to herself. As she describes it, it is nothing grand…just a simple positive affirmation to begin the day and to push out the negativity. Start your day by being kind to yourself and that will lead to being kind to others.

The next tool Michelle addresses is friendship, and she is deliberate in her friendships. She defines her friends as real, one on one, in your face, IRL (in real life) friends, not Facebook or Instagram friends. Your real friends know the real you, the messy you, and what you look like in sweats and without makeup. These are the people that support you at your worst times and that you support in theirs. These are the people that form Michelle's Kitchen Table…the people beyond her family that she trusts and relies on and for whom she would do anything. These are the people that she has invited to pull up a chair to her kitchen table and sit. Friends keep you from isolating yourself from others, and keep you from feeling lonely.

Along with being deliberate in your friendships, Michelle also suggests the same for your committed relationship. She says to "Partner Well." Marriage/Commitment is not the answer to life's issues. It is a relationship that must be tended and worked on together. She reminds us that you are linking two lifestyles together that are probably very different from each other. This is a relationship that needs attention from both sides, not just one; and it should not be rushed-into.

In the middle of Michelle's book, we meet her mother, Marion Robinson. Mrs. R, as she was affectionately referred to by the White House staff, was talked into accompanying Michelle and Barack to the White House to assist in settling Sasha and Malia in their daily routines. It was planned that she would then go back to Chicago; instead, she stayed the whole eight years. Mrs. R kept the President and First Lady grounded by her consistent low-key, undramatic way of life. She maintained a presence, kept tabs on the family and was there to support them as needed. And when Michelle would panic about not being a good parent to her daughters, Mrs. R would quietly tell her to leave the girls alone; they were fine and learning to live life. And she reassured Michelle that she was a good mother.

Michelle points out that what we see is not necessarily the whole story or even the truth. Everyone has a story which they share with others in bits and pieces. For example, the successful woman who claims she is the CEO of a Fortune 500 company, is a mother and spouse who single handedly maintains her household and children and has time to write a self-help book about what she does. What we do not see is all the people in the background that make it happen. No one becomes successful on their own; it is just part of the story and we need to become more comfortable with our own story and with when and how we share it. Another part of ourselves is the armor we wear. In Michelle's case, her adaptability and preparedness are parts of her armor. She shares an incident from the Democratic National Convention when Barack was nominated as the presidential candidate. Michelle was tasked to give the prime-time address, but the left teleprompter was non-functional and the center confidence monitor was blocked by the signs everyone was waving. Thankfully, Michelle was prepared; she had memorized her speech.

Before she moved into the White House as the First Lady, Michelle learned everything she could about what was expected of her. She knew that all eyes would be on her and she wanted to be prepared.

The last tool that Michelle pulls from her toolbox is a simple motto: "When others go low, we go high!" Going high, or taking the higher road, is a choice. Work harder; tell the truth; do your best; keep your perspective; stay tough. Michelle uses this motto to draw a boundary, to pause and be thoughtful. She also sees it as a test. But with all mottos, it is easier to wear the words on a t-shirt than it is to live them, and to put them actively and thoughtfully into practice. As Michelle reminds us, a motto stays hollow if we only repeat it and place it on products to sell. Michelle continues to live by her motto of "Going High."

Upon Reflection

When you first begin this book, Michelle introduces you to knitting. She uses the concept of learning to knit as an analogy of life. She shows the reader a project begins by casting of the first stitch. As with everything in life, it begins with the first step. When life becomes overwhelming, step back and cast that first stitch.

Michelle shows us through the different stories in her book that she faces the same doubts and insecurities that we all do, albeit on a different stage. But she takes the comparison one step further, by showing us how she was able to face these doubts by her choices. She talks to us about her choices in friendships, who she trusts and who she invites to her kitchen table. Michelle encourages us to be deliberate in our friendship choices and why that is important. She also talks to us about her family and the support she receives from them, especially her mother. Mrs. R was a huge support to both Michelle and Barack during their White House years.

She also talks about partnering well. Do not be in a rush to enter a committed relationship, just because you think it is expected of you. Be sure before you say yes. Michelle uses the analogy of going to a farmers' market and looking at all the products for sale. How everyone walks around and looks to see what is available before making a purchase. By using this analogy, she is instructing us to do the same…look around the farmers' market a little longer and see what is available. Ask questions and do not be in a hurry to buy the first thing you see.

Michelle discusses how she prepared to be the First Lady before Barack took office. She said there was no "How To" book on being the First Lady. She looked at what the past First Ladies did and why, and decided what she would do the same, and what she would do differently. This story is an example of her being prepared and how she went about it. Like her story about the Democratic Convention speech and the teleprompter being unusable, she was prepared.

She also talks about being kind, first to ourselves and then to others. If we start off by being kind to ourselves, we are setting up our day to be kind to those around us. There is enough negativity in this world, and everyone needs to be kind to themselves first.

The last tool Michelle discusses is her life motto: "Go High." When others go low and negative, she goes high. What Michelle is saying is: Do not lower your standards. Keep them high. This will ensure that others will rise up to your standards.

Each of these tools creates the light that is within each of us. And it is with this light that we are able to help and support others and they, in turn, can support and help us. There is nothing mystical or magical about these tools. They are all commonsense actions that we can develop and use if we take the time to learn and do. As we do so we can and will make our world a much better place.

As Michelle states "When we are able to recognize our own light, we become empowered to use it. This is the power of the light we carry."

First Lady Michelle Obama

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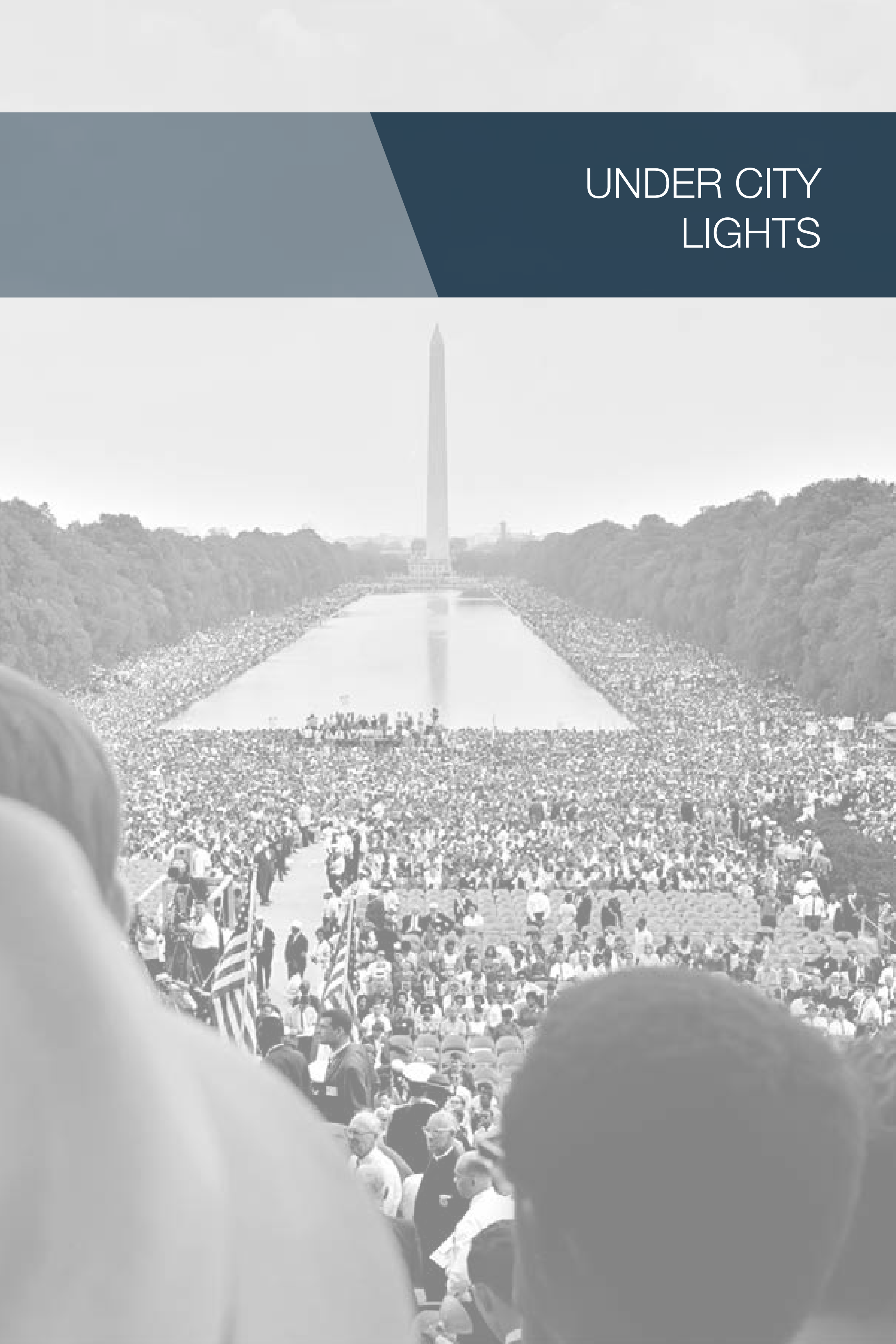
UNDER CITY LIGHTS



A Poem

Division

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Introduction: A Time for Unity

One hundred sixty years ago, on January 1, 1863, President Abraham Lincoln issued the Emancipation Proclamation as the nation entered the third year of the Civil War. The proclamation declared: "that all persons held as slaves"…in the rebelling states…"are, and henceforward shall be free." The dispute over slavery was one of the main driving forces of the Civil War. We now face a time where once again our country seems to be at odds with itself.

Two halves of a whole that should be striving to act as one are instead driving each half further apart. Two hundred and thirty-four years ago the Constitution of the United States was written to Establish Justice and to ensure Domestic Tranquility. Domestic Tranquility, the second driving force of the Constitution. The number two. It is the divisor. Take two sides and divide by two and they become one; yet dividing any number by zero is undefinable.

What is happening in our country, and in the world is undefinable. We should recognize our similarities rather than our differences. We should recognize what binds us together rather than what drives us apart. Two famous people observed the course of humanity and came up with very different viewpoints. Karl Marx stated, "There is no good in humans. They are inherently bad." It is hard to think at its core this could be true. Yet, Anne Frank, a young woman who faced indescribable cruelty and persecution was still able to look at humanity and state "In spite of everything I still believe that people are good at heart." One situation, two viewpoints. Two divided by itself is one. Unity.

Two hundred and thirty-four years ago our forebearers strove to form a more perfect Union. One hundred and sixty years ago Abraham Lincoln recognized the importance of this unity. Sixty years ago, Martin Luther King, Jr. in his "I Have a Dream" speech stated, "It would be fatal for the nation to overlook the urgency of the moment." No words could be truer today and we must not overlook the urgency of this moment in time. It is to see our similarities and not what divides us. A time to see what makes us all one. *A Time for Unity.*

Division

Division, a simple math problem designed to separate into equal parts.
From the beginning there was separation, there was division.
Darkness; then creation. Day and Night, light versus dark.
First Man, then Woman; created in G-d's image made to be equal yet different.
Differences and separation created with intent and good purpose.
Over time, differences became more recognized, identified and highlighted.
My appearance versus yours, my beliefs versus yours.
Differences begin to further the separations.
Sides are chosen, lines are drawn, the Maginot Line, the Mason Dixon line.
North versus South, Axis versus Allies, Collaborators versus Resisters.
Beliefs became motivators for separation and eventually for hatred.
We began as one and over time sought out differences as reasons for Division.
Division, a math problem that takes two numbers on opposite sides of a line to become one.
Two that become one. The divisor creates unity.
Over time rather than unity the division worsens.
The divisors begin to cause disagreements and hostility amongst people.
Dividends versus Divisors, Numerators versus denominators, Catholics versus Protestants,
Aryans versus Jews, White versus Non-White, Heterosexual versus not, namely LGBTQ+.
Despite having been created in G-d's image, people saw separation.
Differences became right versus wrong; determined to stay on opposite sides of the line.
Two numbers that cannot find the answer. Two numbers that cannot become one.
Two numbers that cannot find Unity.
Division. A simple math problem gone awry, going unsolved without an answer.

Author Note

The author is solely responsible for the contents of this poem and reflection. The contents do not necessarily reflect the position of the organizations and communities that the author serves. The author has no financial conflicts of interest.

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A Poem

Uninvited Visitor

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The Story Begins

We lost our oldest son, Josef (Yossi), on February 14, 2019. Josef was a freshman in the College of Engineering at the University of Miami; and was a healthy 18-year-old embarking on his future… until one day he wasn't. Yossi began feeling dizzy when he worked out, lifting weights at the UM gym. What began as dizziness ultimately was revealed to be inoperable brain cancer. From diagnosis to death was nine months, the longest nine months of my life. During that time, I was unable to process my experience, as I was deeply entrenched in each moment and being present for my son and family.

Uninvited Visitor

Grief rarely shows up by invitation.

She doesn't call in advance saying,
"I'll see you at 3 pm on Thursday,"
nor does she send a quick text,
"Stopping by in five…" or "Can you meet me for tea this afternoon?"

She doesn't knock on the door,
or announce her arrival.
Never has she asked, "Is this a good time for you, if not, I'll come back later?"
Rather,
she barges right in.

Without a care for what you happened to be engaged in,
disregarding whether or not you have the time or the space to sink into
the depths of your mourning, the expanse of your sorrow.

Her arrival is swift and unanticipated.
Perhaps it is a photograph that catches your eye,
or the lyrics to a song that play on the radio,
maybe it is the smell of a warm cinnamon bun,

or the heart-shaped leaf that falls to the ground,
you suddenly find your heart cracked wide-open,

once again.

A stream of tears flows from the well
you believed to be dry.
The aching of longing and loss
and love

once again

consume you
like a tsunami.
You cannot breathe,
keeled over in pain.

once again.

You think to yourself, "Well, I didn't see this coming.
I thought I had prepared for your arrival on the day of his death
and on the day of his birth
but not today,
not on this random Monday morning."

And then you hear the wise words of your teacher,
Grief doesn't show up by invitation. It's not how she operates.
She is a reminder of love
and love is always present
and if love is always present
then grief, too, is always present.
So how to live with this uninvited visitor?
By leaning into her presence,
welcoming her with a cup of tea and a warm scone,
accompanying her outside among the trees and the birds,
and reminiscing with her about the one you so love.

Stepping into the present moment
with what is
and not what you wish could have been.

And feeling,
deeply feeling,
the loss and the love
of eternity.

The Journey Continues…For Us All

Only after Yossi died was I able to reflect upon how this trauma had impacted me, my family, and our community. As I revisit those nine months and all that they entailed, I know this unpacking will be a lifelong process. Early on in my mourning, I set aside time to grieve and wail and scream and as the months passed, I found that despite my best efforts to create time and space for my grief, she seemed to play by different rules. With great resolve, I tried to tame my grief, to prepare myself for her entry, and yet, time after time, I was unsuccessful. I remember thinking to myself, "There are no safe spaces, anymore." I would walk down the supermarket aisle and see his favorite cereal and begin to cry. I would be listening to the radio and a favorite song of his began playing and begin to cry; I would drive by a soccer field and think back to all of his games that I attended and begin to cry. Wherever I turned, there he was. Until it finally hit me--Yossi's absence is now his presence. I'm grateful to Francis Weller whose words about grief and love allowed me to sink more fully into my grief, no longer striving to tame or shrink her.

> *"Grief and love are sisters, woven together from the beginning. Their kinship reminds us that there is no love that does not contain loss and no loss that is not a reminder of the love we carry for what we once held close."*
>
> — Francis Weller
>
> *The Wild Edge of Sorrow: Rituals of Renewal and the Sacred Work of Grief*

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Henry M. Jackson Foundation Special Military Health Film Series Continues…

The new YouTube series on military medicine and healthcare continues to be produced and directed by the Henry M. Jackson Foundation for the Advancement of Military Medicine. Information for the first two short episodes that have been completed thus far is found below. These episodes are immensely powerful. They demonstrate how military medicine/healthcare enriches healthcare for all people across the globe. For more information or for submitting suggestions regarding future topics, please contact the Creative Design Department at HJF c/o (240) 694-2000.

2018 Heroes of Military Medicine Ambassador Award

The Air Force's 99th Medical Group was awarded the Hero of Military Medicine Ambassador Award for its heroic response to the October 2017 Las Vegas mass casualty shooting.

Web Address: https://www.youtube.com/watch?v=9O7sL5WPPV0

The Veterans Metrics Initiatives

TVMI—The Veterans Metrics Initiatives is a novel public-private collaboration that unites multi-disciplinary research experts from the Departments of Defense and Veterans Affairs, academic medicine and social science, and industry to develop an evidence-based

Web Address: https://www.youtube.com/watch?v=U2PP1QqFFSM


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