

Summer 8-16-2017

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Evangeline Anne Vargas
evievargas@gmail.com

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The Cuban Experience: Comparative of Health Systems and Infant Mortality Rates

**Evangeline Vargas
MPH Candidate 2017
University of San Francisco**

Abstract

Although the United States is a developed country that spends billions of dollars for its healthcare sector, there are still many risk factors that highly influence our country's respectively high infant mortality rates. Infant mortality rates are affected by a range of social determinants of health, low birth weight, and racial disparities. This paper addresses the United States' and Cuban models of healthcare through a comparative lens to investigate the potential use of Cuba's maternal and infant health practices to mirror similar preventative strategies that promote infant health. The field-based project with the Escuela Nacional de Salud Publica (ENSAP) drew from direct interactions with physicians, patients, professors, and site visits to a variety of community-based clinics and hospitals. Fieldwork experiences strengthened interdisciplinary skills and practices to promote action strategies for community health. The Cuban primary care/prevention-based model was found to be very beneficial and impactful in improving infant mortality rates. The United States can certainly utilize lessons learned from Cuba's community-based health system to integrate public health methods into the medical care field at local, state, and national levels. The cooperative prioritization of maternal and infant health initiatives between social and political sectors in Cuba (Kath, 2007) is an aspect to be learned from by the U.S. in order to benefit maternal and infant health indicators that represent our country's health development for current and future generations.

I. Introduction

During the year 2014, the United States had 5.82 infant deaths per 1000 live births (Kochanek, Murphy, Xu, & Tejada-Vera, 2016). Infant mortality rates (IMR) are significant markers for a country's health. There are many risk factors that contribute to rates of infant mortality such as maternal health, low birth weight, and premature birth (Child Health USA, 2013). In the United States, the leading causes of infant deaths are congenital malformations, disorders that correlate with low birth weight or preterm birth, and complications during pregnancy or at birth (Kochanek et al., 2016). Of the top causes for infant mortality in the United States, low birth weight, preterm birth, and maternal complications are preventable. Critics of the U.S. healthcare system point to its numerous characteristics, e.g., for-profit model, workforce shortages, emphasis on treatment, among others to explain these trends. Here, we focus on infant mortality rates and gaps of social determinants of health and racial disparities to highlight its role in explaining these troubling rates.

While infant mortality rates have decreased in the U.S. from 1980 to 2013, there are still persisting racial disparities and gaps in social determinants of health which affect progression in reducing IMR (Lorenz, Ananth, & D'Alton, 2016). Among the Organization for Economic Co-operation and Development (OECD) countries, the United States had the third highest rate of infant deaths amongst developed countries where in 2013 the country had a rate of 6.0 for every 1000 live births (Lorenze et al., 2016). Of more concern is the prevalence of racial disparity in the United States which has contributed to rates of infant mortality. In 2013, 11.1 non-Hispanic African American infants died per 1000 live births compared to 5.1 infant deaths for non-Hispanic white

infants (Brown Speights, et al., 2017). Such racial disparities portray a much larger picture of our population's health inequalities and the importance of learning from other countries' successful initiatives that address IMR through an understanding of the multitude of risk factors associated.

There are many factors that contribute to the gap in infant mortality rates including: social determinants of health, socio-economic status, racism (structural and relational), lack of insurance coverage, access to quality health care, along with positive factors such as resilience and social support (Brown Speights, et al., 2017). Access to healthcare and systematic processes are of heavy influence for infant health outcomes especially when addressing preventable causes of death. The Cuban model of healthcare which focuses on primary care and prevention offers much insight into the potential of a healthcare system that is offered free-of-charge while also being cost-effective for the country's gross domestic product. In comparison to the United States which spends billions of dollars on maternal and child health programs, Cuba has managed to sustain positive health indicators while only spending about 10% of their 121 billion dollars spent for the Gross National Product (Cuba County Review, 2016). Cuba has managed to sustain its economic and social development despite heavy setbacks associated with the United States government embargo, which impacted the national health care system due to shortages of supplies (Health in the Americas, 2007).

The project draws from firsthand accounts of interacting with the Cuban healthcare and public health systems through a myriad of activities including interviews/meetings with healthcare professionals, site visits to community health clinics, systematic literature reviews, as well as analysis and presentation of research to public

health leadership of la Escuela Nacional de Salud Publica (ENSAP) in Cuba. This paper will compare the health systems of the United States and Cuba to investigate potential utilization of Cuba's Maternal and Infant Health program as a basis to foster effective interventions that address the social determinants of health, low-birth weight, and racial disparities as contributing factors of infant mortality in the U.S.

II. Background

Comparative of Health and Public Health Systems: United States and Cuba

Both the United States and Cuban public health systems are driven by health promotion for the prevention of diseases, support for public health sciences, and to sustain/improve the health statuses of their populations. Both countries have similar Millennium Development Goals (MDGs) that include improving health status indicators such as life expectancies, mortality rates for children under 5 years old, maternal mortality rates, mortality rates due to HIV/AIDS, mortality due to Malaria, and deaths due to TB (Cuba, n.d.). Comparatively the two countries have different overall health systems and country profiles.

United States: Health and Public Health System

The U.S. has a larger population and higher Gross Domestic Product (GDP) compared to Cuba. In 2015, the United States had a Gross Domestic Product of 18.4 trillion dollars of which 17.8% was spent on health expenditures (National Center for Health Statistics, 2017). The country's political-social systems together with the way health resources are offered to our population differ from that of Cuba. A review by Keck & Reed (2012) discussed the two systems in hopes of promoting modifications to the U.S. health system based on Cuba's national health care model. The United States has a market-driven health care system determined by the capitalistic nature of policy and society (Dubus & Traylor, 2015). Public health systems leave

state and local health departments to maintain primary responsibilities for health care under the U.S. constitution (Keck & Reed, 2012). Health care services are not universally offered free of charge which leaves many gaps in our populations access to health care.

Historically, due to rising costs for healthcare many citizens were unable to afford healthcare which led to the insurance system which is now mainly introduced as a benefit from ones employer (Dubus & Traylor, 2015). To date, the insurance system of the United States has become more and more privatized (Thomasson, 2002). In hopes of moving health care coverage towards universal coverage, Medicare and Medicaid were created in the 1960s to bridge the gap in access to medical services for the elderly and those with very low income (Dubus & Traylor, 2015). Unfortunately, such systems created another gap of coverage for those who are uninsured or who may not qualify for Medicaid or Medicare programs (Verissimo & Currie, 2013). With regards to maternal and infant health, Medicaid services such as prenatal and postnatal care is offered to women who are eligible. Unfortunately access to such services is not continuous and does not take effect before or in between pregnancies (Dubus & Traylor, 2015). The lack of continuous health care for women of childbearing age then becomes an interrelated factor in not only the woman's health but also for their infant's health outcomes (Centers for Disease Control and Prevention [CDC], 2006). Such gaps in access to quality and continuous health care lead to the vision behind the Affordable Care Act (ACA), which was enacted and introduced in 2013 (Dubus & Traylor, 2015). The ACA cultivates a healthcare system that strives to improve access to health care and costs by providing coverage for all despite employment status (Dubus & Traylor, 2015). Under the current legislation, the ACA is undergoing repeal and reform efforts by Republican party government officials. Despite the passage of the ACA which sought to

focus healthcare on health promotion and disease prevention, there is still much to be done at the institutional level in order to better the health status indicators of the U.S. such as IMR.

According to Keck & Reed (2012) the United States has been facing a shortage of medical doctors especially in the primary care setting. The average student debt for those pursuing their medical degree is about \$158,000 which certainly hinders the diversity and amount of medical students. Many students then gear towards becoming a specialty provider in order to pay for high student debts (Keck & Reed, 2012). This shortage in primary care physicians is an influencing factor in the way public health and preventative care are integrated into medicine to address public health issues such as high rates of infant mortality in the U.S.

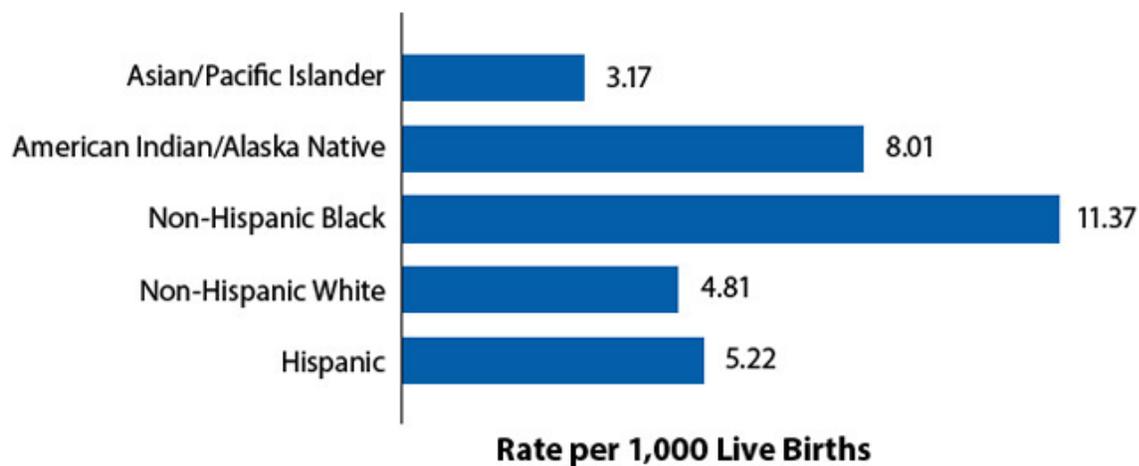


Figure 1. “Infant Mortality Rates by Race and Hispanic Origin, United States, 2014” (Infant Mortality, 2016).

In the review by Lorenz et al. (2016), rates of infant mortality within the United States were assessed together with contributing causes of IMR and existing racial disparities. Although the U.S. spends a large portion of its gross national product on health expenditure there are still high rates of infant mortality for a developed country. Lorenz et al. (2016) found that racial disparity of infant mortality rates are of concern in the United States. Infant mortality rates of babies born to African American women (11.11 deaths per 100 live births) were over double that

of non-Hispanic white women (5.05 deaths per 1000 live births). In the study by Brown Speights et al. (2017), state-level progress for eliminating racial disparities for infant mortality rates was assessed. The study found that only 7 states were projected to potentially achieve racial equality in infant mortality rates by 2050 (Brown Speights et al., 2017). Though states have been making positive and effective efforts in reducing infant mortality rates for African Americans, there is still a lack of progress in reducing Black-White disparities. According to Brown Speights et al. (2017), 68,876 infants died between the years 1999-2013 in 35 of the 50 United States due to racial disparities. Top causes for higher African American infant mortality rates in the U.S. are associated with the neonatal period of gestation. Leading causes include preterm birth, low birth weight, congenital abnormalities, maternal complications, and sudden infant death syndrome. About 23% of infants with low birth weight passed away within their first year of life compared to about 5% of babies with normal birth weight who died within their first year of life (Child Health USA, 2013). Midstream causes that have been found to affect African American IMR include: racial and socioeconomic stress, maternal behaviors, lack of access to healthcare, poor nutrition, and poor maternal health. Upstream causes to Black IMR include structural, systematic, and historical aspects such as segregation, lack of equal access to educational opportunities, structural racism, and poverty. Such upstream causal factors play a role in the health of women, babies, and families (Brown Speights et al., 2017). Qualitative studies and systematic reviews suggest making efforts to eliminating racial disparities in infant mortality rates through the promotion of multilevel interventions that address the social determinants affecting maternal health and ultimately infant health outcomes.

Fry-Johnson, Levine, Rowley, Agbot, & Rust (2010), utilized a trans-geographic analysis to study resilience strategies used within communities that have more risk for racial

disparity in infant mortality rates between black and white infants. Data suggests that although poverty was not eradicated, resilient counties were able to overcome infant mortality rates affected by racial disparities. Researchers correlated findings with potential explanations for the racial disparity in IMR based on social determinants such as low socioeconomic status, educational attainment, race, and access to medical care (such as prenatal care), stress, environment (environmental toxins), discrimination, nutrition, and substance abuse (Fry-Johnson et al., 2010). Many qualitative studies suggest expanding on such policy to move towards a community-based and prevention-oriented health system. Integration of perinatal care, adequate women's health care, and improved social conditions are imperative in efforts to decrease racial disparities and infant mortality rates. Mirroring aspects of Cuba's community-based health model and approach to maternal and infant health could be extremely beneficial to the United States' efforts to improve our population's health through an ecological approach.

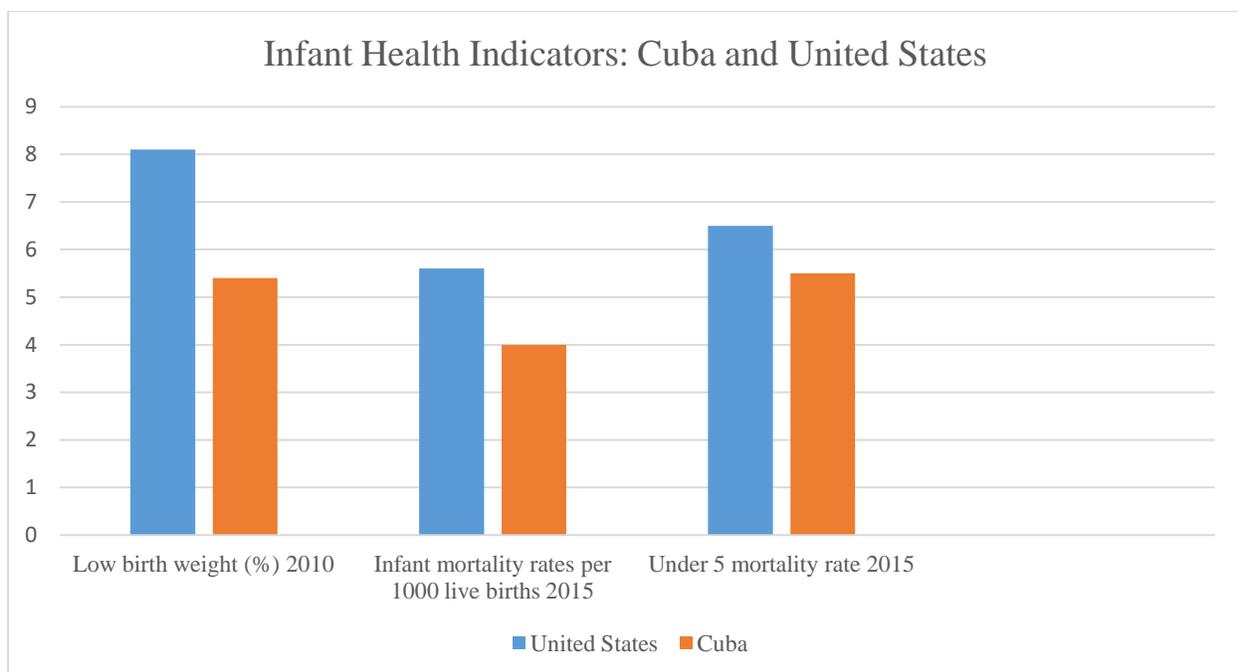


Figure 2. Data for Infant Health Indicators of Cuba and United States (World Bank, n.d.)

Cuba: Health and Public Health System

Under a socialized healthcare system, Cuba has made primary care a priority for its communities. During the mid-1970s issues within the Cuban health system were addressed. Due to long wait times, short office visits, poorly integrated preventative health services, and hospital-based health care a new model of care was formed and offered free of charge to all citizens (Keck & Reed, 2012). Cuba's restructured model of healthcare together with universal education promotes students to become primary care physicians through the incentive of free educational tuition to become family doctors ideally for the community they grew up in (Keck & Reed, 2012). Furthermore, family-nurse teams are integrated into communities that these health professionals are assigned to. Cuba has roughly 1 physician for every 159 people and 1 nurse for every 80 people (Cuban Ministry of Public Health, 2007). These Family Doctor-Nurse teams then work to understand the needs of the community they serve to comprehend the specific social determinants of health affecting the community being served (Keck & Reed, 2012). Cuban policymakers rationalized that a person's health is interrelated with their environment and correlates with their social determinants of health such as biological, social, cultural, and economic factors (Keck & Reed, 2012). Through an ecological framework lens there are a number of factors at the individual, relational, community, and societal levels that interplay with one another and significantly influence one's health (The ecological framework, n.d.).

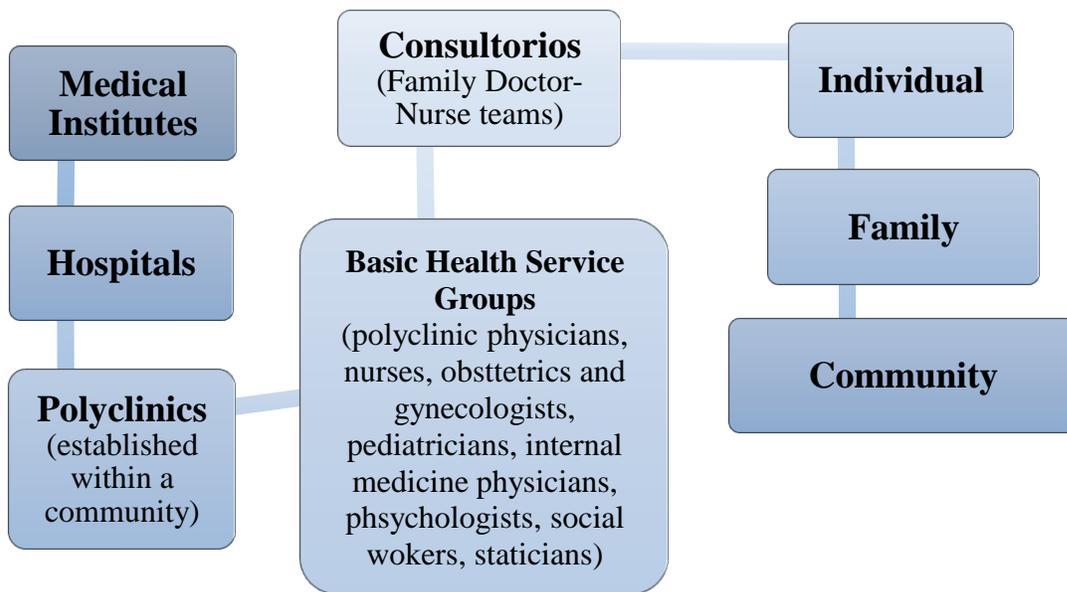


Figure 3. The organizational structure of the Cuban Primary Care model of healthcare (Isabel Benitez Hernandez, 2017).

The Cuban model of health care and public health address levels of the ecological framework in their primary care model and maternal/infant health programs. Community-based family medicine clinics, called *consultorios*, are the base of the primary level of health care and public health system as they provide comprehensive health care to citizens based on where they live (Dubus & Traylor, 2015). Cuba's system focuses on cost-effective interventions due to its low economic status which is why prevention is actively practiced at local primary care clinics where patients are given clinical diagnosis and health education regarding health determinants (Keon, 2009). The inclusive and universal nature of access to health care and resources in Cuba has resulted in increased vaccination rates which has prevented many communicable and chronic illnesses (Keck & Reed, 2012).

Additionally, the Cuban model utilizes polyclinics at the primary level of care for patients who need integration of specialist services (Dubus & Traylor, 2015). Polyclinics provide patients

with multidisciplinary care from a range of specialty services including: “rehabilitation, radiology, ultrasounds, endoscopies, traumatology, emergency services, laboratory testing, family planning, cardiology, dentistry, immunizations, dermatology, internal medicine, pediatrics, and obstetrics and gynecology” (Keon, 2009). Cuba has made maternal, infant, and child’s health top priorities for its health care model. Many preventative measures are taken before, during, and after birth to ensure the wellbeing of infants along with best possible future health outcomes. Under standards of the polyclinics, health professionals classify women based on their individual risk factors if they plan to become pregnant (Keon, 2009). Primary care physicians and nurses collaborate with the patient to alleviate any risk factors before pregnancy so that when a woman becomes pregnant she can have a healthy birth outcome. Furthermore, polyclinics conduct medical genetics testing to evaluate pregnant women and newborns for any genetic risks that could lead to congenital defects or genetic diseases (Keon, 2009). Should a soon-to-be mother have a potentially high-risk pregnancy, they would be referred to a maternity home at as early as 20 weeks of gestation (Bragg et al., 2012). Women are then transferred to a hospital during labor (Dubus & Traylor, 2015).

Maternity homes offer shelter, food, and consistent health care to women with a high risk pregnancy (Dubus & Traylor, 2015). Gestational diabetes or hypertension, psychological issues, low/high pregnancy weight, and *social problems* are some classifications of a high risk pregnancy (Dubus & Traylor, 2015). Classifications under the “high risk pregnancy” umbrella also include an understanding of the social determinants of health that affect a woman’s pregnancy. One of the significant strengths of the Cuban health care system is its coordination of care between different institutions or programs which help support maternal and infant health (Bragg et al., 2012). In 2015 Cuba was validated by the World Health Organization for being one

of the first countries to eliminate HIV/Syphilis mother-to-child transmission through effective antenatal screening and treatment (WHO validates elimination of mother-to-child transmission of HIV and syphilis in Cuba, n.d.). The elimination of HIV/Syphilis mother-to-child transmission has been linked to Cuba's governmental commitment for the health of their population through the implementation of universal health coverage that ensures early access to prenatal care, HIV and Syphilis testing, and treatment for women and their infants who tested positive (Rodríguez, Noda, Ale, & Stamm, 2016).

Under Cuba's secondary level of health care, hospitals provide patients with more intensive care while research and national hospitals are considered to be tertiary levels of care (Keon, 2009). Polyclinics assist tertiary level research through consistent data collection at the community level (Keon, 2009). Such research is used to create and modify health programs for the betterment of Cuba's population health (Keon, 2009). Through community-based, multidimensional, and inter-related health care, Cuba's health system emphasizes preventative care within the clinical setting of medicine (Dubus & Traylor, 2015).

III. Scope of the Project: Fieldwork Experiences

The Escuela Nacional de Salud Publica (ENSAP) is an academic institution of Cuba that facilitates postgraduate training and professional development, research development, formation and evaluation of health technologies, evaluation of professional performance, along with consultations in the field of public health to improve the health and well-being of Cuban, Latin American, and world populations (Quienes somos? | ENSAP, n.d.). Under the field of public health and medical education, ENSAP works to provide populations with health professionals prepared to contribute to high impact health systems that manage knowledge and institutional development. The program seeks to provide students with skills and training

necessary for the development of not only their career but also of social health through the utilization of collaboration and team work. ENSAP provides a range of research and trainings that contributes to the improvement of services offered within Cuban and international health systems.

The project with ENSAP focused on interactive exchanges with Cuban health professionals to gain training in public health practices through lectures, site visits, and an end-of-fieldwork presentation for a topic of interest. Through a number of different overarching lecture themes, health sector priorities, and site visits to health institutions, our project participants were able to gain a deeper understanding of how to conceptualize health, prioritize interventions, and care for vulnerable populations here in the U.S. Personal project goals were to (1) strengthen knowledge of the interdisciplinary skills and practices through Cuba's focus on primary health care for action in family and community health strategies, (2) learn about Cuba's health promotion services at community polyclinics that are used to foster maternal and children's health, and (3) understand various strategies in health promotion and disease prevention for positive maternal and infant health outcomes in Cuba. Over the course of the two week intensive immersion to Cuba, lectures were conducted by ENSAP health professionals/professors to inform students of Cuba's three-tiered health care setting with primary care as the basis for prevention of illnesses. Site visits to community clinics, maternity homes, and hospitals offered the basis for the final presentation that focused on Cuba's MIH program and effective initiatives addressing prioritized health indicators related to maternal, infant, and child health.

In focusing on preventative care, Cuba has managed to foster successful maternal and infant health outcomes such as increasing birth weight, lowering infant mortality rates, and

improving maternal health indicators (Lilia Turquina Gonzalez Cardenas, 2017). Patient communication, preventative services, access to health care, and integration of public health and health systems were observed during daily lectures and site visits. Health education was a common theme in all primary care clinics, hospitals, community mental health centers, and maternity homes. Education was emphasized as being an important factor in increasing the community's understanding and knowledge of a healthy lifestyle and sanitary habits. There is a culture of education in Cuba's socialistic approach that focuses on practical training together with formal educational studies (Carlos Raul del Pozo Cruz, 2017).

Through informal meetings with physicians, professors, and patients, it was found that despite Cuba's lack of resources, the training that medical and health professionals gain from schooling must be in favor of social needs which is why the curriculum is consistently being modified to respond to needs of the country. In the lecture by Professor Carlos Raul del Pozo Cruz (2017), family medicine was discussed as the base of Cuba's health system in which the physician's job is to determine what the social determinants of health are for the community they serve. Prioritized interventions most often address infant and maternity health, senior and older adult care, transmittable diseases, and chronic non-transmissible diseases in family medicine clinics. The public health system of Cuba is based on guiding principles that allow health professionals to use less costly treatments due to the maintenance of good health. Guiding principles of the primary care model involve: accessible and free health care for all, state and social inclusion, no privatized medical practices, promotional and preventative aspects, medical care free of charge, international collaboration globally, intersectoral community-based health care, and evidence-based progression of scientific research (Carlos Raul del Pozo Cruz, 2017).

It was at the maternity home site visit where preventative care was observed in full effect. The Cuban health system recognizes the importance of health promotion in order to modify unhealthy lifestyle behaviors, attitudes, or skills. With long-term goals of avoiding maternal and infant health risks, such as a high risk pregnancy, physicians discussed the importance of actively listening to patients to conduct effective comprehensive physical exams necessary for early detection of health risks. This means that there should be no cap or time frame to which patients are limited to (Carlos Raul del Pozo Cruz, 2017). According to Lilia Turquina Gonzalez Cardenas (2017), due to the lack of technology and medical resources, Cuban doctors must conduct thorough and efficient physical exams at the polyclinic or consultorio health sectors to avoid costly interventions. Thus, maternity homes are significant facets of Cuba's healthcare system which prioritizes maternal, infant, and child health because the well-being of these populations represent the current and long-term health statuses of the population overall. Women with a high risk pregnancy are given tools and resources necessary for short-term goals of reducing risk factors including gestational diabetes, hypertension, stress, gestational obesity, etc. The overall objective of maternity homes is to birth a healthy baby through the broad identification of *risk factors* (Lilia Turquina Gonzalez Cardenas, 2017). The knowledge gained from ENSAP increased comprehension of strategies used to manage and develop research necessary for health equity through effective resources and scientific technology services at national and international levels.

IV. Public/Population Health Impact: Findings and Significance

Case Study: Infant Mortality Rates

Equality of health outcomes for infant health is achievable as seen through the Cuban model of health care. It is possible to provide quality and cost effective maternal and infant

health care in order to decrease rates of infant mortality which will foster reductions in racial disparities for IMR in the United States. Cuban mothers are given a range of preventative care measures such as a minimum of 12 perinatal checkups, active communication with consultorio doctors and nurses, community medical genetics, and maternity homes for high risk pregnancies (Lilia Turquina Gonzalez Cardenas, 2017). According to Bragg et al. (2012), 96% of the women who enter maternity homes have risk for birthing an infant with low weight. The care that pregnant women receive at the community-level clinics has been tied with beneficial health outcomes for mothers and their baby. Cuba's under 5 mortality rate in 2013 was 6 per 1000 live births (Martinez, n.d.). The comprehensive health system of Cuba has contributed to high rates of births conducted in medical institutions adding to Cuba's 99.9% of live births attended by medical professionals. Health education during perinatal screenings have resulted in least 80% of women that breastfeed their infants (Bragg et al., 2012). However Cuba currently faces low birth rates which are expected to affect the country's future (Carlos Raul del Pozo Cruz, 2017). Significant findings derived from the immersion into Cuba's health care model reflect the necessity of identifying what social determinants are affecting specific communities or populations. Maintaining health through health promotion initiatives, programs, and prioritization is most effective for preventing illness rather than classifying patients based on their sickness.

ENSAP Perspectives and Themes

After experiencing the Cuban Primary Care model, it is apparent that there is a need for modification in the way that we think about health care here in the U.S. Without a basis of preventative care and prioritization for our population's health, reducing health indicators such as IMR will not progress quickly. Currently there is a lack of collaboration between hospitals

and public health agencies. Partnerships between the two health sectors are necessary if we hope to move towards racial equality as this has significant influence on communities' health outcomes. Comprehensive and collaborative community-based health care was a key factor in the success of Cuba's maternal and infant health programs. Without the multidimensional and intersectoral collaboration between various health sectors, community stakeholders, families, and the patient themselves; Cuba's focus on primary health care would not be as efficient. Additionally, access to health care not only represents the availability of health institutions but also coverage of such resources which brings universal healthcare to the conversation. In the United States, there is a lack of collaboration and cohesiveness between the various sectors that which health care is administered or regulated. There are many factors that influence the quality of care we receive and most importantly the preventative care we receive. Increasing the knowledge we have about our communities and most vulnerable populations is beneficial when trying to decrease infant mortality rates and racial disparities of health indicators such as IMR.

Recommendations

Moving forward, more research about the social determinants of health as they relate to racial disparities of infant mortality rates is necessary to learn about protective and/or risk factors. The development of a research grant proposal would assist in the formation of more concrete correlations between upstream and downstream social factors that affect the health status of vulnerable populations in the U.S. Potential stakeholders of research grant proposals could include: the Centers for Disease Control and Prevention, Maternal and Infant Health departments of county and state based public health departments, as well as public and non-profit health institutions. Through forged partnerships with stakeholders, implement

participatory evaluations through informant interviews, focus groups interviews, and community group interviews of vulnerable communities who face higher rates of disparity based on indicators such as: social determinants such as socioeconomic status, educational attainment, race, access to medical care (such as prenatal care), levels of stress, environment (environmental toxins), discrimination, access to nutritious food options, and rates of substance abuse (Fry-Johnson et al., 2010). By conducting more evaluations of vulnerable communities' needs and disproportions, programs and initiatives can be fine-tuned to help increase knowledge of common themes of high risk communities in order to help influence best practices for the health sector. Additionally, implement a pilot multidisciplinary community-based low-birth weight prevention program based on the socio-ecological theoretical framework and leverage through current legislation. Lastly, conduct monitoring and evaluation studies of multilevel community-based pilot programs to assess effectiveness of services and resources for lowering negative effects of racial disparity and addressing community health based on social demographics factors.

V. Conclusion

Though the United States has made strides in medical advancement, there are still many risk factors that highly affect our country's health outcomes such as infant mortality rates. Maternal risk factors, low birth weight, and social determinants of health can all act as contributing factors for infant mortality rates in the U.S. Social demographic characteristics have been found to influence low birth-weight gaps rates amongst African American infants in the U.S. (Lorenz et al., 2011). The rate at which African American babies are born underweight and prematurely in the U.S. are over double that of white infants (Fry-Johnson et al., 2010). Additionally, access to healthcare is an important aspect of maternal, infant, and child health

especially for causes of death that are preventable such as low-birth weight or maternal risk factors (Rodriguez et al., 2017). The systematic processes of healthcare are of heavy influence for infant health outcomes. The project with the Escuela Nacional de Salud Publica resulted in strengthened personal skills and practices for preventative care at the primary care level. Site visits to hospitals, mental health clinics, community clinics, maternity homes, and national HIV/AIDS institution offered significant knowledge about effective methods for cost-effective strategies for healthcare, specifically maternal and infant health initiatives. The Cuban model of healthcare focuses on the integration of preventative care into their primary care model. This system offers much insight into the potential of a healthcare system that is offered free-of-charge while also being cost-effective for the country. Through cooperative and collaborative prioritization of health services geared towards maternal and infant health, the Cuban primary health care model can be beneficial in improving rates of infant mortality in the U.S. Modifications and improvements of health indicators such as infant mortality are necessary as this health indicator represents our nation's development for health equity.

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