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GLOBAL HEALTH DIPLOMACY IN PRACTICE

BI-LATERAL COOPERATION TO IMPROVE RURAL HEALTH SYSTEMS IN THE MISSISSIPPI DELTA, USA AND THE ISLAMIC REPUBLIC OF IRAN

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During a 2004 European research trip by Oxford International Development Group (OIDG) in Mississippi, a meeting with representatives from Iran President Khatami's Ministry of Labor and Social Affairs led to a discussion of that country's Primary Health Care (PHC) system, one that had made tremendous strides improving the health of its rural population. This success was achieved despite a critical lack of resources, including trained medical personnel, and implementation during a period of extreme social upheaval caused, in part, by the eight year Iran-Iraq War. Iran's progress was in stark contrast to the systemic failures and pervasive abysmal health indicators in the impoverished Mississippi Delta region. After President Barack Obama's inauguration in 2009, OIDG contacted Iranian public health experts to ask for help adapting their PHC model to Mississippi Delta challenges. This respectful outreach by Americans to Iranians led to the establishment of the Iran/Mississippi Delta Rural Health Care project, which is now well positioned to demonstrate that humanitarian collaboration - and an example of the power of health diplomacy - between the US and Iran can build much-needed trust at this critical time. For the Delta, the project offers the potential to improve the health of its most at-risk citizens; for Iran, it is an opportunity to demonstrate to the U.S. the viability of their PHC system and the dedication of their public health professionals in improving the lives of the less-fortunate, even in the United States.

Keywords

Primary health care, Iran, Mississippi Delta, community health houses, rural health disparities, health diplomacy

Global Health Diplomacy in Practice
Bi-lateral cooperation to improve rural health systems in the Mississippi Delta, USA and the Islamic Republic of Iran

James Miller [1], Ali Akbar Velayati, S. M. Hashemian[2]

As the poorest region of the poorest state, the Mississippi Delta illustrates the huge income and health disparities that are prevalent in the world's richest nation. The Delta in Mississippi is a rural region composed of 18 agricultural counties in the alluvial flood plain of the Mississippi River. This area historically is considered to be one of the most economically and educationally deprived regions of the nation, on a level with some developing nations [3].The majority of the population of these counties is African American, a segment within the U.S. with the highest rates of poverty, chronic diseases, obesity, diabetes, infant mortality, low birth weights, and deaths from accidents.

Studies from the World Bank [4] and World Health Organization [5] indicated that over thirty years the Iranian PHC system had eliminated health disparities between the urban and rural population of a developing nation and done so with minimal resources. Further research confirmed the Iranian PHC model's potential as a cost-effective solution to the Delta's problems. OIDG determined this could be the much-needed paradigm shift for the Mississippi Delta region, as it would move from medically reactive "sick-care" to that of a proactive, community-based primary and preventive integrated health care system.

This working paper covers the health care challenges faced by impoverished citizens in the Mississippi Delta and how the interest and commitment to help, including securing funding, by Iranian public health experts and institutions has created the potential for establishing a new public health infrastructure designed to increase access to care.

The Iran/Mississippi Delta Rural Health Care project also illustrates how international health diplomacy collaboration between committed health professionals in two countries that have been adversaries for over thirty-five years has the potential to overcome the deepest political divides.

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2 Clinical Tuberculosis and Epidemiology Research Center, National Research Institute of Tuberculosis and Lung Diseases, Shahid Behesthi University of Medical Sciences, Tehran, Islamic Republic of Iran.
3 Burd-Sharpes, Sarah, et al. (January 26, 2009). A Portrait of Mississippi: Mississippi Human Development Report. American Human Development Project,
available at: http://www.measureofamerica.org/mississippi/
4 Mehryar, A. The International Bank for Reconstruction and Development /The World Bank. Primary Health Care and the Rural Poor in the Islamic Republic of Iran. A Case Study from Reducing Poverty, Sustaining Growth-What Works, What Doesn't, and Why. (2004).
5 Tavassoli, M. (2008). Iranian health houses open the door to primary care. Bulletin of the World Health Organization, 86(8), 585-586.

Profile of Mississippi

Mississippi is a state in the southern region of the United States with a population of 2.98 million, making it the 32nd most populous state in the nation. Most of its citizens live in rural areas. For generations, people in the U.S. have been gradually leaving farms and concentrating in urban areas, with only 1 in 5 people in the country classified as rural. Mississippi followed a different path, as over 51% still live in rural areas, which is the 4th largest rural population in the country. Up until the decade of the 1930's, African Americans made up the majority of citizens in Mississippi. Although that has changed, there still is a relatively large African American community here. In 2010, Mississippi had the highest proportion of African Americans of any state in the country.

Mississippi is the poorest state in the U.S., with 25% living below the poverty line. The African American poverty rate, however, is over 42%. Many of these people live in impoverished counties in the Delta region located adjacent to the Mississippi River. Mississippi also is the unhealthiest state in the U.S., ranked last in national surveys by respected foundations and institutions[6]. Of special concern, infant and maternal mortality rates in a number of Delta counties are similar to those of Algeria, Libya and Vietnam[7].

Legacy of Racism and Discrimination

From the 1880s into the 1960s, a majority of American states enforced segregation through the enactment of "Jim Crow" laws (so called after a black character in minstrel shows). Jim Crow practices were arguably more deeply entrenched in Mississippi than in any other state. The roots of this lie partly in the large number of slaves in the state before 1865. In 1860, there were over 436,000 slaves in Mississippi, who accounted for more than 55 percent of the population, second only to South Carolina. Following emancipation, many freedmen remained in Mississippi and gained the franchise under the 1868 Reconstruction state constitution, the first constitution of Mississippi not to limit voting to whites. African American Mississippians registered to vote in large numbers: in 1868, 96.7 percent of those eligible to register had done so, compared with 80.9 percent of eligible whites.

Despite the large number of registered voters, African American Mississippians made little mark on the state's politics during Reconstruction. This was largely because of white efforts to prevent them from taking advantage of the franchise. In 1875, the First Mississippi Plan gerrymandered African American majorities into irrelevance, a move

6 United Health Foundation. America's Health Rankings (2013).

7 U.S. Census Bureau and U.S. Department of Health Community Health Status Indicators; The World Bank, Mortality rate, infant (per 1,000 live births).

that was supported by intimidation and violence to discourage them from voting. The results were obvious and immediate: in 1880, 66 percent of registered African Americans did not vote in the presidential election. By 1890, when the Second Mississippi Plan redrew the state constitution, African American disfranchisement was almost complete.

The large-scale exclusion of blacks from the vote was matched by increasing restrictions on their freedom and rights in other aspects of Mississippi life. Before Reconstruction, Mississippi had introduced a series of repressive Black Codes, and many of these were carried on when home rule returned. In 1888, the first Jim Crow law was passed, segregating railroad coaches. In practice, however, Jim Crow had been in place in Mississippi for many years. Even before it came into law in 1888, most railroad coaches were already segregated, as were many other public facilities, including steamboats, hotels, and restaurants. Biracial education was virtually nonexistent; interracial marriage was forbidden, and in their leisure time, the races were separate. Increasingly, blacks and whites lived in different parts of towns by law, while in some towns' curfews defined when blacks could be on the street. [8]

Racism in Mississippi and impact on Health Care

One of the most devastating effects of discrimination during the Jim Crow era was the effect on the health care of African Americans. The combination of poverty and racism put black Americans, especially in the segregated South, in a precarious position regarding their health. The malnutrition of poor blacks had a tremendous effect on their susceptibility to diseases like TB, and the lack of concern for black health from state governments kept those infected from receiving treatment.

In addition to exclusion from proper care, during the Jim Crow era, many African Americans, especially from poverty-stricken rural areas, rarely sought professional medical care, even if it was available. Doctors were people one saw only when they were "really sick," many believed, and hospitals were places where people went to die. Because of both the lack of access and the unwillingness or inability to seek professional medical care, "unknown causes" was a leading explanation for black deaths in many parts of Mississippi well into the twentieth century, as so few African Americans in Mississippi died in a physician's care. [9]

During the 1940s-60s, one of the only hospitals in the Delta that would treat African Americans was the Taborian Hospital in Mound Bayou, Mississippi. Mound Bayou was the first all-African American-governed community established after the Civil War and is the location of the first

8 The Jim Crow Encyclopedia. Westport, CT: Greenwood Press, 2008. The African American Experience. Greenwood Publishing Group. 23 Jan 2014. http://testaae.greenwood.com/doc.aspx?fileID=GR4181&chapterID=GR41813616&path=encyclopedias/greenwood

9 Ibid

rural community health center in the U.S., the Tufts-Delta Health Clinic established in 1967.

Abusive medical research programs further led to a deep distrust of the public health establishment in Mississippi and the South. In 1929, the U.S. Public health service, in cooperation with Mississippi State Health Officials, began testing for syphilis among plantation workers in the Mississippi Delta after plantation managers believed that their African American employees were becoming sick. This eventually led to the formation of health units that would provide various methods of treatment, one being mercury therapy. This involved rubbing the mercury on the abdomen and covering it with a rubber faced binder (mercury belt). The rationale was as the worker plowed or chopped cotton in the fields, the absorption of the mercury would be enhanced. [10]

The Tuskegee Syphilis Study remains as one of the most glaring examples of interlinked histories of racism and medical science in U.S. society. This tragic 40-year long public health project, initiated in 1932, resulted in almost 400 impoverished African American men in Macon County, Alabama, being left untreated for syphilis. However, this scandal was neither the first nor the last in the exploitation of black human subjects in U.S. medical research. In 1945, an African American trucker being treated for injuries received in an accident in Tennessee was surreptitiously placed without his consent into a radiation experiment sponsored by the U.S. Atomic Energy Commission. In the early 1950s, African-Americans in Florida were deliberately exposed to swarms of mosquitoes carrying yellow fever and other diseases in experiments conducted by the Army and the CIA. During the 1960s and '70s, young African-American boys were subjected to sometimes paralyzing neurosurgery by a University of Mississippi researcher who believed brain pathology to be the root of the children's supposed hyperactive behavior. [11]

It is no surprise that many African Americans continue to regard the medical system with apprehension, particularly in light of the history of African Americans disproportionately bearing the burden of the most invasive, inhumane and perilous medical investigations, from the era of slavery to the present day.

10 Swan, L. Alex, Syphilis Demonstrations in Southern Rural Areas, 1929-1932: The Politics of Control., Fisk University Nashville, TN (undated research report)

11 Washington, Harriet A. Medical Apartheid: The Dark History of Medical Experimentation on Black Americans From Colonial Times to the Present. Doubleday;2007

Mississippi Health Status Today

Within the fifty States, including the District of Columbia, Mississippi has been last in overall health rankings since national surveys began in 1990[12]. Poor health indicators include high rates of obesity, diabetes, cancer, high prevalence of smoking, high rate of cardiovascular deaths, and high infant mortality and low birth weight[13]. Many Delta counties in Mississippi, as well as the neighboring states of Arkansas and Louisiana, only have one or two doctors and a few nurses to serve residents that often are isolated by geographical barriers and distributed over large rural areas.

The result has been that the poorest of the nation's low-income areas often do not receive the care they need to prevent or effectively treat chronic diseases and other conditions, and data from these three states clearly underscores the consequences of lack of primary preventive care and access. As in many communities across the U.S., the hospital emergency room has become the primary care "doctor" for the impoverished and working poor and the place of last resort of those with undiagnosed and untreated diseases - even though most are preventable. In 2013, Mississippi led the United States in death rates per 100,000 in heart disease and hypertension/renal failure, was second in death rates for cancer, diabetes, nephritris/kidney disease and blood poisoning, and third in death rates for stroke and homicide[14]. Mississippi also led the U.S. in the motor vehicle death rate and child death rate, ages 1-14[15]. People die younger in Mississippi than Libya or Lithuania[16].

HIV/AIDS

As with other southern states, Mississippi faces an HIV/AIDS epidemic. Although 32nd in population, in 2010 Mississippi ranked 7th in the nation for HIV/AIDS prevalence[17]. In 2011, 76% of new documented HIV cases were African-American, although they make up only 37% of the population. The rate of HIV infections among African Americans was 8 times higher than Whites in 2011. And in 2011, 72% of the total population of people living with HIV Disease in Mississippi was African-American[18]. By race, African Americans face the most severe burden of HIV and account for more new HIV infections, people estimated to be living with HIV disease, and HIV-related deaths than any other racial/ethnic group in the U.S[19].

12 United Health Foundation. America's Health Rankings (2013).
13 Ibid
14 U.S. Centers for Disease Control and Prevention (2013).
15 Ibid
16 Crowley, G. MSNBC. (2012, December 12). Health in the two Americas. (www.msnbc.com/msnbc/lesseducation-shorter-life)
17 Mississippi State Department of Health, STD/HIV Office, Sexually Transmitted Diseases, Including HIV and AIDS, available at http://healthyms.com/msdhsite/_static/resources/5070.pdf
18 Mississippi State Department of Health, Mississippians Living with HIV Disease in 2011 By Age Group, Sex, Race, Exposure Category, and Public Health District, available at http://msdh.ms.gov/msdhsite/_static/resources/4769.pdf
19 U.S. Centers for Disease Control and Prevention available at http://www.cdc.gov/hiv/risk/racialethnic/aa/facts/

Human Rights Watch released a report in 2011, "Rights at Risk: State Response to HIV in Mississippi." Findings of that report showed Mississippi not only fails to invest in HIV/AIDS prevention and care, it also promotes punitive, stigmatizing, and discriminatory policies that undermine efforts to reach the populations most vulnerable to HIV. Mississippi has actively resisted increased federal funding for HIV/AIDS programs and services. Throughout Mississippi, people living with HIV, including their advocates, health providers and public officials describe an extreme stigma surrounding HIV that is for many, more frightening than the disease itself. In Mississippi, the percentage of people with HIV not receiving care or support services is comparable to that in Botswana, Ethiopia, and Rwanda [20].

Lack of Health Insurance

In 2013, 19% of Mississippi residents were uninsured, although 56 percent of all poor and uninsured adults were African American, even though they make up only 38 percent of the state's total population [21]. Although the federal health care legislation passed in 2010, the Patient Protection and Affordable Care Act ("ACA" referred to as "Obamacare") provides for the expansion of insurance for the poor under the Medicaid program, 26 states, including Mississippi, have opted out of Medicaid expansion, which will leave approximately 5 million Americans nation-wide without coverage. Mississippi leads the nation in the percentage of uninsured adults in the coverage gap with 37 percent [22],or 137,800 [23].

Cuts to nutritional programs for women, infants, and children

In 2013, U.S. budget cuts at the federal level have eliminated 8,000 mothers and young children in Mississippi from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) program. WIC provides nutrition and breastfeeding education, nutritious foods, and improved healthcare and social service access for low and

20 Human Rights Watch. (2011, March 9). Rights at Risk: State Response to HIV in Mississippi, available at: http://www.hrw.org/reports/2011/03/09/rights-risk-0

21 Tavernise, S. & Gebeloff, R. (2013, October 2). Millions of Poor Are Left Uncovered by Health Law, New York Times, available at: http://www.nytimes.com/2013/10/03/health/millions-of-poor-are-left-uncovered-byhealth-law.html?emc=edit_tnt_20131003&tntemail0=y&_r=1&pagewanted=all&

22 Cortez, M. (2013, October 17). Push Against Obamacare Leaves 5 Million Without Coverage. Bloomberg News, available at http://www.bloomberg.com/news/2013-10-17/push-against-obamacare-leaves-5-millionwithout-coverage.html

23 From NY Times, October 3, 2013. Millions of poor are left uncovered by health law. "Mississippi has the largest percentage of poor and uninsured people in the country...an unemployed 53-year-old whose most recent job was as a maintenance worker at a public school, has had problems with his leg since surgery last year. His income is below Mississippi's ceiling for Medicaid — about $3,000 a year — but he has no dependent children, so he does not qualify. And his income is too low to make him eligible for subsidies on the federal health exchange. 'You got to be almost dead before you can get Medicaid in Mississippi,' he said."

moderate-income women and children[24]. Mississippi has the highest percentage of WIC-eligible women and children in the U.S., 54%[25].

In addition to WIC, cuts to the Children's Hospitals Graduate Medical Education program are increasing shortages in pediatric specialties, especially in rural areas. Also, 28,500 women, children and families were cut from services designed to promote optimal health, reduce disparities, combat infant mortality, prevent chronic conditions, and improve access to quality health care in Mississippi[26].

Iran/Mississippi Delta Rural Health Care Project Research

Early 2009, the Iranian Foreign Ministry approved visas for a delegation led by OIDG to tour rural PHC facilities in Fars Province managed by Shiraz University of Medical Sciences (SUMS). Joining the tour were representatives from Jackson State University and the Jackson Medical Mall Foundation. Prior to departure in May, OIDG met with the Office of Iranian Affairs of the U.S. Department of State to brief them on the upcoming trip. OIDG also met with the Democrat majority staff of the Senate Foreign Relations Committee chairman, Senator John Kerry. Both the DoS and SFRC staff were very supportive of this effort; the DoS also assisted OIDG in applying for an Office of Foreign Assets Control Iranian Transaction License, which was granted in July 2009, and subsequently twice renewed.

Dr. Kamal Shadpour on his first research trip to the Mississippi Delta, October 2009. Standing to his right is his wife, Dr. Parivash Ghavamian.

The May 2009 tour included visits to rural community health houses, rural health centers, hospitals, and meetings at Tehran University of Medical Sciences (TUMS) with one of the three architects of the Iranian PHC model, Dr. Kamel Shadpour. This visit confirmed the viability of the model's impact on the rural communities, in particular the services provided through the primary care access point, the Health House, and the pivotal role-played by Community Health Workers ("Behvarzes").

24 American Academy of Pediatrics. (2012). Sequestration's Devastating Cuts to Maternal and Child Health Programs: Mississippi. Available at: http://www.aap.org/en-us/advocacy-and-policy/federal-advocacy/accessto-care/Documents/Mississippi.pdf

25 Lee, S. (2013, October 4). Congressional Record available at http://thomas.loc.gov/cgi bin/query/F?r113:1:./temp/~r113gaGimh:e46707:

26 American Academy of Pediatrics. (2012). Sequestration's Devastating Cuts to Maternal and Child Health Programs: Mississippi. Available at: http://www.aap.org/en-us/advocacy-and-policy/federal-advocacy/accessto-care/Documents/Mississippi.pdf

Dr. Shadpour's contribution to the design of the Iranian PHC model, and to the objectives of primary health care in the region, was recognized in 2005 by the World Health Organization Regional Office for the Eastern Mediterranean when it awarded him the Dr. A. T. Shousha Foundation Prize. In his letter of nomination for the award, Dr. Nabil M. Kronfol, President of the Lebanese HealthCare Management Association, wrote:

> *"Dr. Shadpour has dedicated himself ever since 1980 to develop the Primary health care system in Iran. He literally visited far stretched villages in most of the provinces, studying their routes of communications, their needs, discussing the health care needs of the population with the community, advocating good health practices, teaching the population and the health workers. This has meant spending years traveling across the country, in all weathers and conditions, away from his family and loved ones. Well, it has paid very well. Very few countries in the world have been able to provide access to care to 95% of the population, within a well-balanced referral system and at a relatively low, inexpensive, affordable and sustainable manner. Iran should, in all modesty, be proud of its accomplishments."*

In October 2009, a delegation including Dr. Shadpour and Dr. Hossein Malekfazali of TUMS (winner of the 2007 UN Population Award) came to Mississippi to participate in a conference on health disparities at Jackson Medical Mall in Jackson, Mississippi. The Iranians also toured the Delta region to begin an assessment process to identify the needs of the communities in the region, the resources required to provide those services, and to develop a strategy to adapt the Iranian PHC model to the Delta. This trip, and a subsequent return tour of the Delta in 2010, enabled Shadpour and Malekafzali to develop the project framework for a "Mississippi Community Health House Network" and training of community health workers at Jackson State University. Each visit by the Iranians was facilitated by the U.S. Department of State, which provided expedited processing of visas and public diplomacy travel support.

Based upon Dr. Shadpour's and Dr. Malekafzali's recommendations, OIDG contacted a number of communities in the Delta region, fifteen which expressed interest in the potential of a Community Health House being located in their area. Shadpour and Malekafzali also suggested community health houses/health workers provide the following preventive and primary care services adapted from the Iranian health house model and based upon the needs they identified as the most critical for impoverished Delta residents: 1) Early detection/screening for hypertension, diabetes and other conditions; 2) Early prenatal care; 3) Immunizations; 4) Home visits for mothers before and after delivery; 5) Family planning and interconceptional care; 6) Providing education and counseling related to asthma, sickle

cell disease, HIV/AIDS; 7) Assuring proper preparation of the home environment and follow-up for discharged hospital patients to reduce the length of stays in the hospital and avoid re-admittance due to non-compliance, etc.; 8) Guidance on appropriate use of hospital emergency rooms; 9) Tracking teen pregnancies and birth weight; 10) Identifying and correcting environmental and occupational health hazards; 11) Participating in epidemiological studies; 12) Monitoring Medicaid/ Children's Health Insurance Program (CHIP) annual eligibility recertification, assisting with enrollment (including state health insurance exchanges); 13) Conducting monthly census of the health status of the community to be entered into the health IT tracking and assessment database of the system; 14) Performing ongoing assessments and mitigating any environmental factors within homes that may have a negative impact on the health of residents; 15) Resolving outstanding issues by working with individuals, families, volunteers, the community, non-profit organizations, government social services and other agencies; and, 16) Offering health education for the community through information about and promotion of good health practices.

During an interview for MSNBC[27], Congressman Bennie Thompson (MS-2nd), whose district was the center of the Iran/Mississippi Rural Health Care project initiative, said:

> *"A lot of us are looking for solutions, and in this instance it's not the politics of Iran, it's the fact they have put together a health model that could be emulated here in the Mississippi Delta… This might be a step in normalizing some of the relations with Iran…I'm more concerned how we can get it in my district than who came up with the idea…I would hope that the politics of the moment won't work adversely toward trying to accomplish the health house concept in my district."*

OIDG also contacted rural health clinics and hospitals in the region to solicit their participation as part of an integrated health delivery network made possible by the community health house and services of community health workers. Although there were initial concerns expressed by private physicians that the health house would divert patients away from their practice, once they understood that health houses would not be providing medical services but would also work with physicians to better coordinate their patient's care, including compliance, those questions were quickly resolved.

There also were concerns expressed by a number of African Americans to be served by the health house system that this project was, in some form, similar to other public health research programs where the people saw - at best - little direct benefit for their participation. Older African Americans expressed their skepticism rooted in their cultural memory of past public

27 Interview of Congressman Bennie Thompson, MSNBC. Accessible at: http://www.nbcnews.com/id/3032619/ns/nightly_news#36143340

health research abuses in Mississippi and throughout the South. However, as the approach to the research planned to document outcomes by the Iran/Mississippi Delta project was explained to be that of community-based participatory research, which brings community members into the study as partners, not just subjects, those concerns, and fears dissipated.

People-to-People Contact

In addition to the fact-finding aspect of the trips to Iran and the Mississippi Delta, these visits provided the opportunity for Iranians and Americans, both professionals and community residents, to engage in extended personal contact. One Iranian health worker described the visit by the Americans to learn about their PHC system as a "miracle" [28]. Another described the Americans' visit this way: "I always knew rain fell down, but I never knew it could fall up." In Mississippi, Delta residents from Baptist Town provided the Iranian delegation with an impromptu black gospel and blues concert. One of the hosts to the Iranians' visit was Sylvester Hoover, 52, owner of Baptist Town's only business, a one-room grocery, laundromat and barbecue grill: "They were just hugging us they were so excited. They loved it," Hoover said [29].

Media Interest

The visits and project also prompted substantial interest by local, national and international media in the West [30] and Iran [31]. The Sunday London Times called the project "groundbreaking" in a December 20, 2009 article [32] by respected international journalist Christina Lamb, currently writing a book on the project. A January 24, 2010 Los Angeles Times front page story included a quote from an 80-year old, uninsured, arthritic and impoverished Delta resident; when told the Iranians were working to help establish a health house in the area, she said: "I ain't never heard of Iran, but we sure could use their help." [33] NBC Nightly News is in production on an exclusive, extended segment on the latest project developments.

Barriers to PHC Implementation in the Delta

Despite grass-roots enthusiasm in Mississippi for the PHC/Health House Network model, extensive positive media focus, and ongoing advocacy in Iran by Dr. Shadpour and Dr. Malekafzali, over the past two years little progress was achieved in implementing the project in the Delta. In the U.S., increased Congressional animosity towards Iran, tightened sanctions, and a lack

28 Limbert, J. & Miller, J. (2013, March 18). A model for cooperation between Iran and US. Christian Science Monitor Weekly, 105(17), 36.
29 Drogin, Bob. (January 25, 2010). Illness is their Common Enemy. Los Angeles Times.
30 Sunday London Times, Los Angeles Times, Washington Post, AP, New York Times Sunday Magazine, NBC Nightly News, French Television Channel Four, AARP Bulletin, Al Jazeera International, MSNBC, Lancet Journal, NIH Fogerty International Center Global Health Matters, regional MS/AR newspapers.
31 IRINN, PressTV, IRIB TV4, Archives of Iranian Medicine; article coÐwritten with NRITLD staff for Iranian English and FarsiÐlanguage journals in preparation.
32 Lamb, Christina. (December 20, 2009). Deep South Calls in Iran to Cure its Health Blues. Sunday London Times.
33 Ibid

of federal and foundation funding opportunities for implementing a primary health care system pilot - let alone one with Iranian participation - blocked any potential for securing financial support. In Iran, during the pre-presidential 2013 election period, factions opposed to engagement with the United States, regardless of its humanitarian focus and positive international media response, worked aggressively to block further project collaboration.

However, the election of President Rouhani and the new project partnership between the Center for International Research on the Social Determinants of Rural Health (CIRSDRH, the research organization of OIDG), the National Research Institute for Tuberculosis and Lung Diseases (NRITLD) at Shahid Behesthi University of Medical Sciences, the Iranian Ministry of Health and Medical Education (MoH), and international funding opportunities through the new partnership, provides the opportunity for a project restart, and an expansion of areas of cooperation between Iranian and American institutions.

Iran/Mississippi Delta Project Overview

The original (2009-2010) Iran/Mississippi Delta project was a plan to establish a network of community health houses in selected counties with health indicators and disparities similar to the entire region. Each health house catchment area would cover approximately 1,500-2,000 people. The Mississippi Delta region encompasses eighteen core counties, which have poverty rates among the highest in the state - and consequently the nation. However, for the purposes of implementing the pilot under the new MOU, CIRSDRH selected four counties, Bolivar, Washington, Sunflower and Leflore, as the target area for health houses. The health house network will provide the basic foundation upon which to build an integrated system that links all levels of care - from PHC to acute/critical care.

These counties reflect the overall poor health and poverty indicators found throughout the Delta region: [34,35]

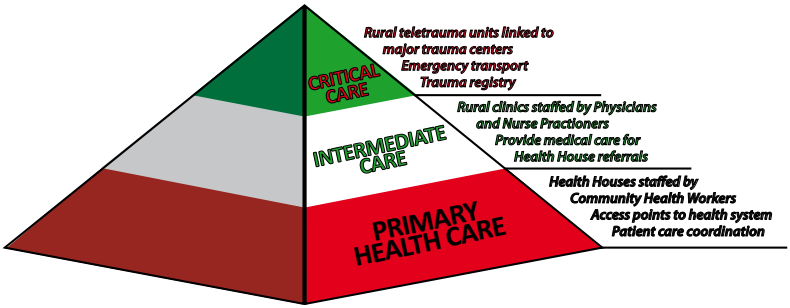
- Bolivar County - Population - 33,904; below poverty level - 34.6%; diabetes rate - 10.4%; obesity rate - 34%; high blood pressure - 35.6%; average life expectancy - 71.4/yrs (U.S. median 76.5/yrs); African American infant mortality 15 (per 1k) vs. Libya 15.
- Sunflower County - Population - 28,431; below poverty level - 31.8%; diabetes rate - 7.4%; obesity rate - 36.3%; high blood pressure - 39.6%; average life expectancy - 71.1/yrs; African American infant mortality 19 vs. Algeria 19.
- Leflore County - Population - 30,948; below poverty level - 40.4%; diabetes rate - 11.9%; obesity rate - 30.7%; high blood pressure - 39.6%; average life expectancy - 72.5/yrs; African American infant mortality 19.1 vs. Vietnam 19.

34 County data from: U.S. Census Bureau and U.S. Department of Health Community Health Status Indicators.
35 The World Bank, Mortality rate, infant (per 1,000 live births).

→ Washington County - Population - 49,750; below poverty level - 36%; diabetes rate - 10.2%; obesity rate - 35.7%; high blood pressure - 40.8%; average life expectancy - 71.1/yrs; AfricanAmerican infant mortality 13 vs. Thailand 13.

According to the U.S. Health and Human Services Community Health Status Indicators, these counties compare unfavorably to peer counties throughout the U.S. in the following areas: 1) Low Birth Wt. (<2500 g), 2) Very Low Birth Wt. (<1500 g), 3) Premature Births (<37 weeks), 4) Births to Women under 18, 5) Births to Unmarried Women, 6) No Care in First Trimester, 7) Infant Mortality, 8) Black non-Hispanic Infant Mortality, 9) Neonatal Infant Mortality, 10) Postneonatal Infant Mortality, 11) Breast Cancer (Female), 12) Colon Cancer, 13) Coronary Heart Disease, 14) Lung Cancer, and 15) Stroke.

In addition to each health house, the project will establish an equivalent facility to that of the Iranian PHC rural health center, with the following enhancement: The rural health center will be modified to also serve as a small scale, acute/critical care center. The resulting system will result in a health care pyramid, with the widest coverage being the PHC community health house foundation, intermediate care, and at the top, acute/critical care. Acute/critical care medical personnel also will collaborate with the primary care physicians, nurse practitioners and community health workers in patient assessments via the health house telemedicine links, and, once diagnosed, will collaborate with patient medical care as required



Memorandum of Understanding - A Project Restart and Expanded Bilateral Cooperation

During discussions held October 10-24, 2013 in Tehran between NRITLD, the Iranian MoH and CIRSDRH, a Memorandum of Understanding (MOU) was developed for the purpose of implementing the pyramid project in the Mississippi Delta. However, given its potential for demonstrating the effectiveness of such a comprehensive and integrated system of care serving all levels, it was decided a duplicate pilot demonstration project be established in Iran parallel to the one in Mississippi. The lessons-learned from the two facilities could provide both nations with invaluable information that would strengthen their respective health care systems. It also would provide an opportunity to demonstrate the pyramid concept for possible implementation in other regions of the world. In Iran, integration of acute care within the pyramid model will include development and implementation of short duration Fundamentals of Critical Care Support courses to disseminate information nationally about critical care and upgrading standards within the MoH to decrease infection, sepsis and mortality.

The MOU also includes the following areas of collaboration:

- Applied and other research activities to both monitor and document health outcomes from the delivery of primary and preventive care services through the health house system and generate research studies and other reports for use by health policy makers in Iran and U.S.;
- Establishment of educational opportunities and programs to enable Iranian medical students to pursue degrees and licenses which will allow them to work together with U.S. medical students as teams to support services provided through the Mississippi Community Health House network and/or other rural areas of the United States where there are critical shortages of primary care providers and a lack of PHC system infrastructure through which to provide access to care;
- Research on basic and advanced treatment programs for chronic and infectious diseases prevalent in both the Mississippi Delta and Iran;
- Research, study and compare health insurance and government payment models in the U.S. and Iran to provide policy makers with recommendations for improving health financing in both countries that ensures health care services for the poor and makes health care affordable and sustainable;
- Establishment of a joint website to support distance learning programs related to project areas, to provide opportunities for timely exchange of ideas between researchers and project participants, to post research papers and commentary from the Parties, participating institutes, universities and individuals, and to provide information regarding global health issues and the importance of health diplomacy in the world today; and,

- Establishment of a joint research and project administration center in Mississippi to provide logistical support necessary for medical research personnel and support staff from Iran to come to the U.S. to work on collaborative projects developed under the auspices of this Memorandum of Understanding.

Other university and institutional project partners in Iran and the U.S. will be invited to participate in the implementation of the pilot, research programs, and other project activities that may be appropriate and beneficial to the health of the people of both countries.

Conclusion

The Iran/Mississippi rural health project originally was viewed as a modest, but important step to promote peace and better understanding between Americans and Iranians. The project has reversed old attitudes and patterns of interaction: Now Americans were respectfully asking Iranians for help with an American problem. From the Iranian point of view, this change is profound. This project follows in the tradition of the collaboration of Soviet and American doctors during the height of the cold war - collaboration that helped pave the way for treaties to reduce the threat of nuclear weapons [36].

Dr. Jack Geiger, the Arthur C. Logan Professor Emeritus of Community Medicine, City University of New York Medical School and founder of the first rural community health center in the United States (1967), wrote in his Afterword to Dr. Kamal Shadpour's draft for his book, "Networking Primary Health Care in Iran: Mississippi Discovers the Iranian Health Care System" [37]:

"I write this as the physician who initiated the community health center model in the U.S. and launched and directed the nation's first two community health centers - in the Mississippi Delta and inner-city Boston. Both are still flourishing 45 years later and have served as the models for what is now a national network of more than 1,100 Community Health Centers (CHC) serving some 20 million low-income patients. I believe the health house model has the same potential for a national impact, and especially for impoverished rural areas suffering near epidemic levels of diabetes, obesity, heart disease and infant mortality.

I have been back to rural Mississippi many times in recent years, and it is clear that - in the face of just such epidemics - further innovations are urgently needed. From my perspective, the health house concept - training and employing locally-based community health workers as outreach workers, health educators, case-finders and follow-up agents, in close vertical coordination with community health centers and community hospitals- would be just such an innovation.

Four decades ago, my colleagues and I recognized that basic medical services alone in rural clinics were not enough to improve people's health; we needed to proactively address the social determinants of health and, in particular, to empower communities by giving them the skills, knowledge and local personnel to participate effectively in accessing and

36 Limbert, J. & Miller, J. (2013, March 18). A model for cooperation between Iran and US. Christian Science Monitor Weekly, 105(17), 36

37 Shadpour, Kamal, et al. (2012). Networking Primary Health Care in Iran: Mississippi Discovers the Iranian Health Care System. (currently unpublished)

utilizing the health care system and in taking care of their own health needs.

The Mississippi Delta health house network model also offers a significant historical parallel. When we first looked at the idea of establishing community health centers in the U.S., our model was one based on a network of CHCs in (of all places) apartheid South Africa, to which the Rockefeller Foundation had sent me, as a visiting medical student some years earlier, to study and work at its flagship rural Pholela Health Center, which - over a few years - had literally transformed the health status of one of the poorest and most disease-ridden populations I have encountered anywhere, in part through the training and use of community health workers.

The parallels with the poverty and racism we found in Mississippi in 1964 were apparent. It didn't matter where the model had originated, because there was overwhelming evidence that it worked. I believe the same thing has happened: we have found a model in Iran (of all places) that has been effective in eliminating disparities between rural and urban populations there for thirty years and is strongly endorsed by the World Health Organization.

I have monitored health care and health status in the Mississippi Delta region for forty years, and have been profoundly disappointed by the recent lack of progress. The level of human suffering that continues to exist is a moral issue that demands new efforts. I believe this health house network model from Iran, with its vertical integration with existing centers, practices, and community hospitals, and use of new types of community health workers at a time of major health personnel shortages in the area, offers much for the region - and our nation.

This would be true health care reform for a population that has desperately needed it for many years."

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