

Quality health care for Middle Eastern and North Africans as a sustainable competitive advantage

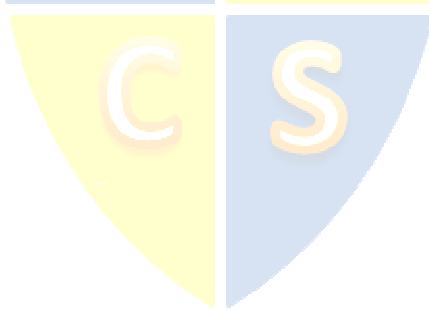
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Abstract

An effort to provide medical efficacy and access to culturally competent health care for Middle Eastern and North African populations in America is needed. Unifying best practices and promoting competent health care strategies in which all stakeholders have identical access and equity will prove to be useful. The United States medical model is ethnocentric, medical research tends to be homogenous, yet our community is diverse. Expanding competent health care to the Middle Eastern and North African subpopulation will increase profits, expand providers' client base, meet community needs, and pioneer world renowned medical care and research.

Keywords: Cultural competent health care, Health care for Arabs, Health care for Middle Easterners in America, Health care for North Africans in America, United States health care model, Middle Eastern Subtypes, North African Subtypes, Barriers to effective health care for MENA patients



INTRODUCTION

Since 2004, over 7 million Middle Easterners and North Africans have been welcomed to America through issuance of an I-94 (Department of Homeland Security, 2013), and approximately half a million have acquired legal permanent residency (Department of Homeland Security, 2013). In addition, America has over 1.9 million Arab Americans (U.S. Census Bureau, 2014). Plentiful opportunities exist for forward-thinking networks to capture the loyalty of an underserved market niche. Health care networks meeting the unique medical needs of Arabs, Israeli's and North Africans have significant growth potential. These physicians will have cultural training and expertise to provide value-based care, reducing readmission rates, lowering patient costs and increasing revenue. Creating culturally competent health care models in densely populated areas allows for cost efficient adaptation in less densely populated areas over time.

The majority of Arab and Israeli Americans, visitors and immigrants, have higher levels of education and are economically better off than the overall American median (US Census Bureau, 2014). The median income for Arab Americans is \$53,046 and Israeli Americans' median income is \$66,355 (US Census Bureau, 2014). In addition, Arab and Israeli Americans primarily have private insurance and low uninsured ratios (US Census Bureau, 2015). They can afford the customized care they require. Arab and Israeli Americans are active members of the community, reshaping the nation by adding cultural and religious beliefs. Their professional skills and talents help drive the nation's GDP and position the American health care system to address under-served needs and under-researched conditions of Middle Eastern/North African community members, including the classification system of Middle Eastern and North African phenotypes.

MIDDLE EASTERN AND NORTH AFRICAN SUBTYPES

While many group Middle Easterners and North Africans [MENA] self-identify as Arabs, it is important to note that Jewish Israelis are classified and self-identify as non-Arab. Jewish Israelis are Jewish as a race and a religion (JewishVirtualLibrary.org, 2015). Between 2004 to 2013 over 7,061,019 Middle Eastern and North African (MENA) nonimmigrant individuals were granted entry to the United States (Department of Homeland Security, 2013). In addition, 456,379 individuals from the MENA region received permanent residency (Department of Homeland Security, 2013). Finally, as of 2014, the United States was home to 1.9 million Arab Americans and home to 148,514 Israeli Americans (US Census Bureau, 2014).

The Arab and Israeli populations in America reside in all 50 states (Arab American Institute Foundation, 2012). However, the majority, 94% percent, reside in metropolitan areas. The top five metropolitan areas for Arab Americans are Los Angeles, Detroit, New York, Chicago, and Washington D.C. (Arab American Institute Foundation, 2012). The following states also have a high level of Arab Americans Florida, Texas, New Jersey, Ohio, Massachusetts, Pennsylvania and Virginia (Arab American Institute Foundation, 2012). The Jewish Data Bank identifies the following areas with the highest levels of Jewish (Israeli) residents New York, California, Florida, New Jersey, Illinois, Pennsylvania, Massachusetts, and Maryland (Berman Jewish DataBank, The Jewish Federations of North America, 2013).

Atypical Middle Eastern/North African Medical Conditions

Atypical medical conditions are more prevalent in Middle Eastern and North Africans. Unique health care needs due to the rapid increase in population, rate of consanguinity, and genetic differences requires new protocols and patient specific care (El-Hazmi et al, 2011). Physicians conducting research, prevention and management strategies could benefit from sustainable advantages.

Diabetes Mellitus

Diabetes is a global epidemic. More than 78.6 million US adults are overweight (CDC, 2015). Non-Hispanic blacks have the highest rate of obesity, with Hispanics having the second highest rate (CDC, 2015). Obesity-related conditions include type 2 diabetes and the estimated annual cost of obesity in America in 2008 was \$147 billion (CDC, 2015). Current preventative strategies for obesity and diabetes have been largely ineffective. The increase in obesity prevalence only partly explains the increase in diabetes. The increased prevalence and burden of diabetes in developed nations is generally occurring for a variety of reasons, one being an increase in the proportion in the population with high-diabetes-risk ethnicities (Dixon, 2015). Effective strategies for obesity-diabetes prevention and management at a population level are desperately needed globally (Dixon, 2015).

It is noted that the Eastern Mediterranean and the Middle East are regions with the highest rates of diabetes (Tabish, 2007). Diabetes is common among Arab Americans. In the first reported study on diabetes prevalence in Arab Americans, the findings support the high prevalence to be related to ATP III and WHO definitions (Jaber et al, 2004). ATP III guidelines uses LDL markers (National Institute of Health, 2001) while WHO uses fasting glucose levels (World Health Organization, 2005).

Arab Gulf Peninsula Genomic Diseases.

With the support of the Gulf Cooperation Council (GCC), beginning in 2003, the Kingdom of Saudi Arabia began an initiative to catalog severe genetic disorders within the Arab gulf peninsula. The goals of creating an GCC based catalog are to improve prevention of severe genetic disorders mainly related to consanguinity, diet and general health. The Catalog of Transmission Genetics in Arabs (CTGA) online database curates over 1,000 disease phenotypes with a focus on the epidemiology in the Gulf Cooperation Council, which consists of Kingdom of Saudi Arabia, Qatar, Oman, Bahrain, Kuwait, and United Arab Emirates (Abu-Elmagd, 2015). In an effort to inform the public and academic awareness, nearly 250 associated disease loci have been mapped.

Consanguinity is a significant part of Arab culture and many individuals are unaware of the genetic ramifications. It is very common for individuals in Arab countries to marry first cousins, with Saudi Arabia having the highest level of consanguinity in the Arab gulf region (Abu-Elmagd, 2015). The CTGA study showed that at least 38% of the parents of babies with congenital malformations were consanguineous (Abu-Elmagd, 2015).

Due to consanguinity abnormal embryo formations are 1) single-gene anomalies, 2) chromosomal anomalies, 3) early maternal illness during pregnancy 4) environmental and genetic induces and 5) unknown, which account for ~50% congenital malformations (Abu-Elmagd, 2015). The majority of malformations include cardiovascular, musculoskeletal, urinary and skeletal (Abu-Elmagd, 2015). Many of these conditions are summarized in Table 1:

Table 1: Consanguinity and Genetic Disorders

Type	Disease	Disease prevalence* (%)	Consanguinity
Chromosomal	Down syndrome	1.8	ND
	Congenital Malformations or birth defects	2- 3	++
Polygenic and/or multifactorial	Congenital heart disease (CHD)	5.4-10.7	+
	Cystic fibrosis	0.24	++
	Duchene muscular dystrophy (DMD)	0.025	+
	Hereditary Recessive deafness	130	++
	Hereditary blindness & visual impairment	90	++
	Diabetes mellitus	110 to 237	ND
	Thalassemia	0.5 to 2.6	++
Monogenic	Sickle Cell Disease (SCD)	9 to 14.5	++
	G6PD deficiency	7.7 to 20	++

*Rates from national and/or regional studies done in Saudi Arabia

Source: (Abu-Elmagd, 2015) High correlation is noted using “++”, with positive correlation using “+”. Not determinable prevalence is noted using “ND” (Abu-Elmagd, 2015).

Congenital malformations and birth defects are significantly correlated to consanguinity. These particular studies found that 38% of babies born to consanguineous parents (Abu-Elmagd, 2015). Polygenic and/or multifactorial disorders, such as CHD, are highly prevalent in first cousin marriages and differ in type by region (Abu-Elmagd, 2015). Monogenic diseases, such as Sickle Cell Disease (SCD), are highly correlated to consanguinity. In 2004, as an effort to reduce the levels of SCD in babies, Saudi Ministry of Health began premarital basic blood testing examination (Abu-Elmagd, 2015). However, the tests are not accessible to all and the general public lack education and awareness on the importance of such tests (Abu-Elmagd, 2015).

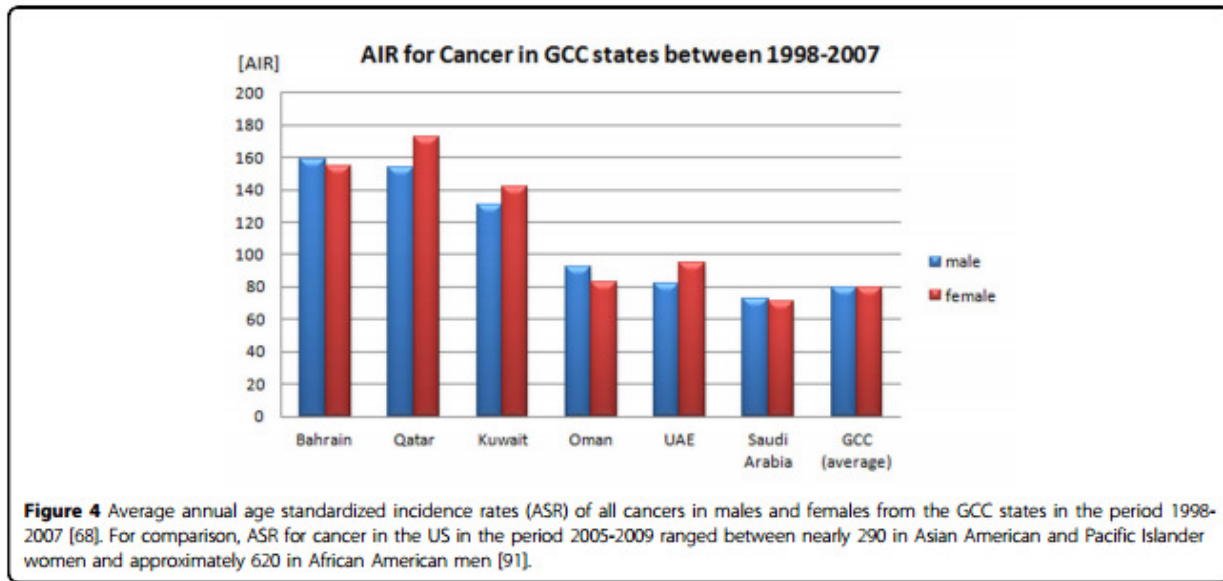
tRNA

Researchers could benefit from expanding the tRNA remodeling in metazoan mitochondrial genomes. tRNA mutations are associated with diabetes mellitus (Suzuki, 1997) and the role of tRNA in the development of type 2 diabetes is important for accurate decoding of cognate codon (Wei, 2012, 2014). Because the mitochondrial tRNAs duplicate, mutations can occur in the gene resulting in abnormalities. Mitochondrial tRNAs contain proteins encoded in the mitogenome that are evolutionary (Sahyoun, 2015), allowing researchers the opportunity to pinpoint mutations and provide well documented evidence of racial and ethnic specific differences and predispositions.

Other Medical Condition

Other medical conditions that plague the GCC are infertility and pre-implantation genetic diagnosis, and specific cancer types (Abu-Elmagd, 2015). Thyroid and liver cancer, as well as leukemia and non-Hodgkin's lymphoma (NHL) are relatively more common than in the USA, with prostate cancer being less frequent in the GCC areas. Childhood cancer vs. adult cancer is also higher in the GCC region (Abu-Elmagd, 2015). These data can be illustrated in Figure 1:

Figure 1: Heightened Cancer Rates:



Source: (Abu-Elmagd, 2015)

BARRIERS TO EFFECTIVE MEDICAL CARE

Research has identified four major barriers to effective customized medical care for MENA noncitizens and citizens in the United States, both on the part of patients and providers:

- A lack of accessible medical information and treatment options in Arabic (Arab Community Center for Economic and Social Services, 1999)
- A lack of accessible information for health care providers on the special medical needs of Middle Eastern and North Africans (Saleh et al, 2009)
- MENA patient lack of understanding and trust in Westernized medical values, rules, procedures to respect religious practices (Association of American Medical Colleges, 2015)
- Health care providers lack of understanding and respect for religious practices (Director of The MILLA Project, 2015; Laird et al, 2007)

Figure 2: Customized Healthcare

		<i>Access & Information</i>	
<i>Patients</i>	Information and counsel in Arabic	Training & info on MENA specific medical needs/conditions	<i>Practitioner</i>
	Understanding and trust in health providers	Training and info on religious traditions	
<i>Cultural Sensitivity</i>			

Fortunately, inadequate resources are not an issue. In 2014, the median American household income was \$53,046 (US Census Bureau, 2014). Similarly, the 1,927,432 Arab American’s median

income was \$52,096 (US Census Bureau, 2014). Consequently their ability to afford and obtain health insurance is within reach. The total Israeli Americans in 2014 was 148,514, with a median income of \$66,355 (US Census Bureau, 2014). This is \$13,309 greater than the median American household income. Insurance coverage is summarized in Table 3:

Table 3: MENA Insurance Rates

	<u>Arab American</u>	<u>Israeli American</u>
Civilian noninstitutionalized population	1,911,957	147,166
With private health insurance	58.4%	70.4%
No health insurance coverage	14.1%	9.9%

Source: (US Census Bureau, 2015)

Further, Arab and Israeli Americans have lower sequential poverty rates than the median average (US Census Bureau, 2014). Out of 1.9 million Arab American individuals the overall poverty rate was 19% and the Israeli American poverty rate was even lower at 11.3% (US Census Bureau, 2014). These under-served market segments clearly have the resources necessary to justify customized care for their special needs. Individuals having the ability to choose the insurance that meets their needs allows for private health insurance companies to compete for these middle class clients, potentially pulling them away from less culturally sensitive competitors by offering quality providers in Arab friendly networks. Networks with providers who honor cultural and religious differences, as well as work with Imams in the community, will gain loyal customers (Director of The MILLA Project, 2015). Creating relationships with mutual benefits will allow physicians to provide superior preventive care and effective pre/post screenings while improving the health insurance module.

Accessible Information for Patients

Health care networks, including insurance providers, could benefit from providing easily accessible information in Hebrew and Arabic (Arab Community Center for Economic and Social Services, 1999). In addition, networks and insurance providers could gain new clients and/or retain existing clients by updating their customer service line to include Arabic and/or Hebrew speaking customer service agents (Director of The MILLA Project, 2015; Hadziabdic & Hjelm, 2014).

While providers could benefit from receiving cultural training and creating culturally competent health care environments (Saleh et al, 2009), they need to be advertised. Due to the differences in health care models between the Middle East/North Africa and America, education efforts could significantly impact preventive care for the Arab and Israeli community members (Director of The MILLA Project, 2015; Hasnain et al, 2011).

Public health and health education tend to be limited in the Arab nations. The idea of preventive care is an unknown luxury. Moreover, health education is highly limited. The general level of public awareness about health issues tends to be low. (Hammad et al, 1999)

Content marketing is relatively inexpensive and teaming up with local Rabbis, Imams, and cultural centers could be an effective method to involve the community with promoting the medical

education campaign (Padela et al, 2011; Padela et al, 2012; Flannelly et al, 2006). Having multi-lingual staff and physicians that provide medical and procedural information in alternative languages will assist clients to better understand their preventive and/or reactive care (Karlner et al, 2007).

In addition to utilizing religious and cultural centers to assist with health care education, over 36,156,245 individuals were admitted into the registered hospitals (AHA, 2014). Individuals unfamiliar with America's health care system over rely on the emergency room for routine medical issues (Quyen et al, 2003). This provides an opportunity to assist the Arab/Israeli Americans with health care education.

While hospitals are appropriate for individuals with medical emergencies, people commonly use them because they lack access to a primary care provider and some individuals lack health insurance (Kronick, 2015). Hospitals could utilize this opportunity to assist the Arab/Israeli community with information on how to utilize the American health care system, provide referrals to culturally competent physicians and insurance providers. This information should be available in Arabic and/or Hebrew.

Accessible Information and Training for Health Care Providers

America's monogenomic and ethnocentric health care system perpetuates the health care gap for Middle Eastern/North African subpopulations. The Institute of Medicine's (IOM) report on unequal treatment concluded "racial and ethnic disparities in health care exist and, because they are associated with worse outcomes in many cases, are unacceptable." The IOM report defined disparities in health care as "racial or ethnic differences in the quality of health care that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention" (Stith, 2002).

This is partially due to Federal guidelines that force racial misclassification. Federal guidelines require five minimum categories for data on race since the revision for the 2000 Census. The five minimum categories are American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. There are two categories for ethnicity being either "Hispanic or Latino" or "Not Hispanic or Latino" (Office of Management and Budget, 1997). This classification system leaves a gap in the documentation of Middle Eastern and North African individuals, citizens and/or non-citizens, receiving care from medical providers. Middle Eastern and North Africans are classified as "White", "Black", or "Asian" depending on their physical characteristics or the country they originate. Because they are not systematically tracked, the numbers of Middle Eastern/North Africans seeking medical services are under-reported (Braveman et al, 2011; Aswad, 2001).

Medical care professionals that service low and modest income Arab and Israeli Americans and sign value-based contracts with public and private providers could improve value based care by receiving cultural training from nonprofit agencies whose staff specializes in servicing individuals within those demographics for a nominal fee (Emanuel, 2014).

Cultural Sensitivity for Health Care Providers

America's physicians could economically benefit by understanding the factors that patients' value when making medical decisions. The majority of Middle Eastern/North African health care models use the socialized government system. While many MENA countries employ the Western allopathic system (Hammad et al, 1999), it is important to note that the medical context varies depending on region, social status, urban vs. rural dwelling, and acts of war. Countries experiencing

civil unrest, such as Libya, have limited access to health care, supplies and medicine (Naicker et al, 2009). When economically possible, Libyans travel to Tunisia for medical services. (Abdulsalam, personal communication, October 3, 2015).

Awareness of medical practices in the clients' home country will assist providers with understanding their client's attitudes, beliefs and practices towards Western medicine. Middle Eastern and North African societies are considered collective societies whereas America is considered individualistic (Kagitcibasi, 1997). The differences to business, especially to that of medical providers, are significant. One that is individualistic puts his/her self as the priority rather than any social institution (family, workplace, business/product loyalty, etc) (Rudenstam, 2012). Collectivism prioritizes the social institution or group over that of his/her self (Rudenstam, 2012). Most societies are not at one extreme or another of a spectrum of individualist and collective. Understanding the basic structure of the client's culture could assist health care provider meet clients' expectations. For example, those with a higher level of income expect to utilize private-fee-for-service physicians that reduce waiting times and provide higher levels of care (Hammad et al, 1999)

Middle Easterners/North Africans identified quality as the main factor for health/care medicine purchase decisions (Nielsen, 2013). Middle Eastern/North Africans surveyed stated they prefer to see a physician that practices medicine with religious understanding (The MILLA Project, 2015). To the Middle Eastern/North Africans, that is quality medicine. "Religion was an important guiding source for decision making among 71 percent of Middle East/North Africa respondents, which far exceeded the global average of 32 percent" (Nielsen, 2013).

As health care moves towards patient centered medical care, and the increasing use of systematic health care referrals, the importance of cultural competency in the health care field is imperative to meeting the medical needs of our diverse community. Religious sensitivity could assist health care professionals with prescribing medications that do not directly violate the patient's belief system (Hammad et al, 1999; Judaism 101, 2011).

Middle East/North Africa respondents relied most on the advice of professionals, where North American respondents put the least trust in products recommended by professionals (35%) or other's influence (25%).” (Nielsen, 2013).

Patient Trust in Health Care Providers

Many individuals from the MENA region utilize their place of worship for physician referrals (Hadziabdic & Hjelm, 2014). Clients prefer a physician that understands their culture, religion and language. Predominant religions in the MENA region are Islam, Judaism and Christianity. Provider/client communication in Arabic also fosters relationships, promotes collaboration, and allows the client to feel comfortable asking questions which could reduce the no-show rate for follow up appointments (Sharma et al, 1987; Epstein et al, 2015).

It is recommended the health care network include religious institutions in the referral system. Health care professionals could receive many referrals if they market to religious institutions, cultural centers, immigration resettlement agencies, and other immigrant focused agencies (Flannelly et al, 2006; Hammad et al, 1999). Medical care facilities could reach the MENA subpopulations by becoming culturally competent. Staff and physicians who speak another language, learn and practice different ideas, beliefs, behaviors and knowledge specific to the clients' racial or ethnic group will increase patient satisfaction and gain loyal medical clients. In addition, informing the health care

network and referral system of the provider's competencies will promote access to quality care (Association of American Medical Colleges, 2015).

Encouraging minorities from the MENA region to attend medical school and provide a place of employment within the United States health care system (Association of American Medical Colleges, 2015) is an achievable and sustainable solution that will ensure improvements to the health care network. America has over 209,000 practicing primary physicians (Agency for Healthcare Research and Quality, 2014). Only 1.5% of total practicing physicians in the United States are Arab Americans (National Arab American Medical Association, 2015). Despite the fact there is some thought within the health care field that MENA immigrants should assimilate into their host country's view of health and well-being, this thought is flawed, and physicians are paying the economic price (Hammad et al, 1999).

IMPOVERISHED MIDDLE EASTERN AND NORTH AFRICANS - A HIGH POTENTIAL MARKET SEGMENT

Each individual, regardless of age or country of origin, will require a medical home in America. The majority of Arab and Israeli Americans hold private insurance (US Census Bureau, 2015). Incentives are being created for providers that practice culturally competent value-based health care and social responsibility (servicing the impoverished) (Mayberry et al, 2006). However, there are also meaningful incentives to provide care for those on public insurance, despite reduced reimbursements, given their upward mobility and future earnings potential.

Arab and Israeli Americans are socially responsible groups that value businesses that provide quality services with sound economical business principles (Hasnain et al, 2011), including social support into the clinical practice models will raise patient satisfaction and endure loyalty. Interventions are typically conducted at the primary care provider level (Bachrach, 2014). Primary providers who accept private and public insurance while conducting cost-effective interventions will impact personalized health care growth, driving insurance companies to change payer methodology to value-based reimbursements (Bachrach, 2014).

Each individual that comes to the United States under nonimmigrant status is required to have health insurance (ObamaCare Facts, 2015) . Because of the ACA, insurance is now available for purchase using the Marketplace, as summarized in Table 4:

Table 4: 2014 American Community Survey

	<u>Israeli American</u>	<u>Arab American</u>
Total Israeli Population	148,514	1,927,432
Civilian noninstitutionalized population w/ public insurance coverage	25.3%	33.2%
With Cash Public Assistance	3.4%	3.80%
With Food Stamps/Snap	8.50%	15.80%
Poverty Rates	11%	19%

Source: (US Census Bureau, 2014)

Due to recent changes in the health care system driven by Medicaid and Medicare regulations and mandates, many hospitals and independent providers have been forced to consolidate by forming groups or health care systems. Independent providers could soon be obsolete in the market (Gunderman & Albin, 2015). The market consolidation will impact long-term and short-term

hospitals, referring physicians and specialists (Cutler & Morton, 2013). For example, providers (physicians and small hospitals) could benefit financially by joining academic medical center's systems (Cutler & Morton, 2013). Joining groups or health care systems allows for electronic patient referrals to primary care physicians, specialists and mental health providers. Many of the referrals are for patients who have yet to find a primary care provider (also referred to as a medical home) and visit the emergency room for reactive care and/or assistance in finding a provider (Cutler & Morton, 2013).

In addition to market segmentation, a new trend of volume-based care to value-based care is emerging (Porter & Lee, 2013). Medicaid and Medicare recipients tend to be binary, either long-term or short-term reliant (US Census Bureau, 2015). Provider investment in servicing the impoverished is an emerging business trend (Bachrach, 2014).

New public and private payment models are holding providers accountable for health care quality and costs, offering both an imperative and a financial opportunity for providers to look beyond patients' medical needs. Notably, almost two-thirds of providers report that they are signing value-based contracts with commercial payers, and provider participation in contracts in which they share financial risk for health outcomes more than doubled between 2011 and 2013. That trend is likely to continue. (Bachrach, 2014).

While the socio-economic beliefs are discussed, the collective culture that exists within these groups provides the necessary support for educational investment and financial upward mobility. Collective cultures not only provide support for those within their group but also businesses that support these groups. Businesses, such as medical providers, health care networks and insurance providers, could benefit from understanding that collective consumption requires qualitative expansion (Castells, 1980). Winning the loyalty of this subgroup in any area of the network carries over to all other business included in that network.

Physicians are rapidly moving from private practice to an employed model and are being acquired by health systems and health plans. Both vertical (health systems acquiring physician practices, ambulatory centers, diagnostic centers, home care services, and durable medical equipment and wellness companies) and horizontal (hospitals acquiring other hospitals) consolidation has been increasing, despite heightened regulatory scrutiny. (Deloitte, 2015).

Socio-Economic Mobility

Arab American's socio-economic beliefs are driving factors for obtaining higher levels of education and securing long-term careers in white collar industries, makes the transition from public to private insurance a probability. With over 73% of Arab Americans in professional sections, 14% are employed in the service sector (overall American average is 17%) and 12% hold positions within the government (Arab American Institute Foundation, 2014). These collectivist emphasis on the value of work permeate immigrant communities as well. Physicians with cultural training position themselves to take in additional Arab and Israeli Americans with low/modest income levels, provide value-based care at reduce patient costs, invest in a future where those incomes are likely to increase (Bachrach, 2014).

Similarly, Israeli American's socio-economic beliefs and ability for upward mobility closely mimic that of the Arab Americans. Over 92.9% obtained their high school diploma with over 50% continuing to secure their bachelor's degree and 22% obtaining a graduate degree or higher (US

Census Bureau, 2014). The majority of Israeli Americans (81.5%) are employed in professional industries, with 13.6% being employed within the service industry (US Census Bureau, 2014). As Israeli American clients move outside of the poverty level and towards middle class their loyalty to their physicians will remain steadfast.

THE BUSINESS CASE FOR CULTURALLY SENSITIVE HEALTH CARE

The implications of a growing diverse community with the impending threat of a physician shortage has the potential to leave America unprepared to provide medical efficacy to its residents and international visitors. A common worthwhile goal in which multiple stakeholders receive mutually beneficial results is to move away from an ethnocentric health care concept and roll out a diverse health care model. Many resources that are required for health care facilities to become culturally competent exist within our dynamic community. Once a provider becomes culturally competent, the referral systems and health care networks in which they are embedded benefit as well. This represents a serious opportunity for revenue enhancement since MENA individual are above the overall American average in income, education, social mobility and customer loyalty.

Health insurance has always been at the center of many medical discussions. The health insurance system is restructuring to meet the varying needs of America's comprehensive population. With Centers for Medicare and Medicaid Services looking for providers to meet the individualized medical needs of their participants by placing financial pressure on physicians through fee reductions, providers accepting Medicaid and Medicare could benefit by accepting Middle Eastern and North African clients and providing culturally competent medical services as an investment in future social mobility. Providing quality services in clients' native language while understanding and respecting cultural and/or religious beliefs will ensure a loyal medical clientele.

Research funding agencies, both private and public, could fiscally benefit while simultaneously pioneering novel pharmagenomic personalization which assists physicians with preventing or managing serious adverse drug reactions within the Middle Eastern and North African communities while modeling systems that could be utilized for other minority groups. In addition to pharmagenomics, researchers could identify why Middle Easterners and North Africans have a higher rate of diabetes, specific types of cancer, and enzyme malfunctions.

Moving the 1920s ethnocentric medical model to a cultural competent model, while meeting the needs of each individual, requires economic investment but offers substantial return. In the long term, creating culturally competent health care models in densely populated areas allows for cost efficient adaptation in less densely populated areas. Some reforms and initiatives are more challenging than others, suggesting a sequencing strategy to build momentum, as modeled in Figure 3:

Figure 3: Sequencing Customization

High	<u>Delayed Goal</u> Poverty Care	<u>Long term Goal</u> Genomic Research Low Density Rollout
Investment Required	<u>Immediate Goal</u> Translation/Access Medical Training on MENA conditions	<u>Intermediate Goal</u> Building Patient Trust Cultural Sensitivity Training
Low	Low	High

Initiative Complexity

Sequencing Customization

The sequencing of customizing care is focused on assisting professionals with the flexibility of tailoring specific programs to meet the needs of the providers and community while justifying their expenditures. The initial investment required and the complexity of each initiative varies, and begins with simple, low investment goals -small wins - that will progressively justify more ambitious initiatives. Following the sequencing matrix allows the provider to be competent in providing individualized health care, thus increasing their revenue model.

Delayed medical care in America is challenging. Factors contributing to delayed health care are lack of insurance, lack of accessibility and lack of physician availability (National Association of Community Health Centers, 2012). In 2011, over 53% of hospitalizations could have been prevented if primary care needs were met (National Association of Community Health Centers, 2012). Physicians who serve medically delayed patients have a high level of investment due to transforming the patient's care process from reactive to preventive (Kaplan & Porter, 2011). In addition, there is an overall cost reduction to the United States health care GDP (Kaplan & Porter, 2011).

Genomic Research in Middle Eastern and North African (MENA) communities is highly complex with a high level of investment. However, researchers who invest in MENA genomic research will impact the health care system worldwide. While the Middle Eastern countries and community members in America are expecting a high level of GDP growth, they are constrained by weak research and development (excluding Israel and Qatar) (Grueber & Studt, 2014). In addition, the research and development investment will increase in America with funding being provided from state and private sectors (Grueber & Studt, 2014). Researchers and developers who concentrate on the MENA community will forward the health care development, receive research funding, and be pioneers in identifying genomic differences within the MENA community and other ethnicities. Creating culturally competent health care models in densely populated areas such as Los Angeles, Detroit, New York, Chicago, and Washington D.C. (Arab American Institute Foundation, 2012) allows for cost efficient adaptation in less densely populated areas. Unifying best practices in health care for the MENA community requires low density roll out. Middle Eastern and North African community members reside in all 50 states (Arab American Institute Foundation, 2012). Using models and implementation methods created in densely populated areas reduces difficulties commonly found in rural areas (Silow-Carroll & Edwards, 2013).

Translation and access to training on medical conditions commonly found in the MENA community requires little investment and low effort. Understanding the unique medical needs of the MENA clientele allows physicians to provide Westernized medical health care education and services, while promoting physician/patient trust (Association of American Medical Colleges, 2015). Physicians that provide medical and procedural information in alternative languages will assist clients to better understand their preventive and/or reactive care (Karliner et al, 2007). Providers nurturing patient trust and shared goals will adjust their clinical practices by adopting education, training and tools for the entire staff (Silow-Carroll & Edwards, 2013).

In an era of extreme competitive rivalry in health care markets, under-serviced market segments with significant first-mover advantages are extremely hard to identify (Porter, 2008). The MENA population in America represents a potentially lucrative market segment with an above average income and resource base. Initiatives for customized care in areas with MENA population centers offer intriguing possibilities. While the operationalization of such initiatives is complex and will need further research, overall strategy offers real sustainable competitive advantages for first movers.

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