

The Value of Incorporating Anthropology into Chronic Illness Treatment in the United States  
with an Analysis of Heart Disease

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A SENIOR CAPSTONE PROJECT  
Presented to  
The Department of Anthropology  
The Colorado College

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2018

Approved: \_\_\_\_\_  
Date: \_\_\_\_\_

**Abstract**

The United States spends more money than any other high-income country on healthcare but has poorer outcomes in key healthcare measures. Integrating holistic anthropological theories and tools such as ethnography or evolutionary approaches can help medical practitioners deliver more effective care when faced with pressures and difficulties that occur when operating in the United States healthcare system. This incorporation of anthropology with biomedical care is specifically pertinent to chronic disease treatment. Here, I suggest anthropological theories and tools to improve the treatment of chronic illnesses. At the end of the theoretical discussion, I examine these issues with a focus on heart disease. Heart disease treatment in the United States is an example of a disease that could benefit greatly from the employment of an anthropological lens. I found that heart disease treatment in the United States does not cater treatment to individual cases or consider a variety of factors, even though heart disease commonly involves lifestyle factors.

On my honor, I have neither given, nor received, any unauthorized aid on this project. Honor Code Upheld.

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## **Acknowledgements**

To the Colorado College Anthropology Department for the resources and instruction provided. To my anthropology professors over the years who cultivated a sense of inquiry in me and provided a holistic and empathetic lens to view the world with. To Krista Fish, for providing oversight, comments and support advising me over the years and specifically on this project. To all of my professors at Colorado College for the instruction and framework of information to pull from while researching this project. To Colorado College for providing an unbelievably valuable and productive learning environment full of opportunities and inter-disciplinary learning. To everyone who read and provided comments and thoughts on the drafts of this project.

## **Introduction**

Providing quality health care is necessary for a thriving nation as it leads to happier and more capable individuals (World Health Organization, n.d.). Scientific findings have allowed great strides within health care, treating and curing ailments that were once a death sentence (Beeson 1980; Cooter and Pickstone 2000; Porter 1997). Scientific and technological advancements, however, do not always translate into quality health care. For example, obesity and type 2 diabetes have become global epidemics despite these advancements (Alberti 2001). Furthermore, the United States (U.S.) spends fifty percent more on healthcare than the next highest spending high-income country of France (Squires and Anderson 2015). Despite this, the U.S. has poorer outcomes on key measures, such as life expectancy and the prevalence of chronic conditions (Squires and Anderson 2015). At the same time, Americans are the top consumers of sophisticated diagnostic imaging technology (e.g. MRIs) and prescription drugs (Squires and Anderson 2015). The U.S. remains the only economically developed country that does not have a national program that ensures universal healthcare access (Waitzkin 2000).

Despite the United States spending notably more on healthcare and steady increases in this spending over the last three decades, it has poorer results than other countries (Woolf and Aron 2013). This discrepancy may be explained by socioeconomic disparities because health in the U.S. is strongly patterned along socioeconomic lines (Braveman et al 2009). While the socially advantaged in the U.S. may consume technology and prescription drugs at high rates, lower socioeconomic groups may not have access to more basic health needs which contribute to the low health outcomes measures in the U.S. This disparity presents a striking contradiction, as money and technology are not leading to satisfactory health outcomes and raises the question of how medicine could be practiced more effectively in the United States. Here I suggest

anthropological theories and tools that can improve medical practice in the U.S. around chronic illness, using heart disease as a specific example.

**Thesis statement: The benefit of anthropology to chronic illness care**

My own interest in pursuing a health profession, along with listening to general complaints about United States health care from family and friends, led me to explore different theories concerning health care practice. When narrowing down my research focus, I planned to look at how the scientific emphasis of western medicine and other economic pressures could interfere with natural human healing processes. I also wanted to investigate whether other approaches could be integrated to better care of patients with chronic illness in the United States. As I explored a plethora of ideas and theories, I realized the many different ways anthropology could inform and improve the medical field. Here, I argue for how valuable anthropological theories and tools (e.g. ethnography or narrative medicine practices) are to medical practitioners striving for optimal care, specifically around chronic illnesses in the United States. These tools can improve medical practitioner's delivery of "health care" but are unable to address the broader problems with the United States' "healthcare" system. For example, ethnographic skills such as interviews and observation can garner information about an illness, such as whether someone can do more around the house or feels better, that biological measure cannot. Therefore, ethnography practice fosters the practitioner's skills to gather and recognize a variety of information about a specific patient. While scientific progress has greatly improved biomedical care, incorporating an anthropological lens into practice can also improve the quality of care delivered, most importantly for practitioners who interact with patients in diagnosis and treatment.

## **Recent attempts to address healthcare problems in the United States**

The Affordable Care Act (ACA) attempts to address problems within the United States healthcare system, striving to provide health insurance to more Americans at a lower cost (Affordable Care Act, n.d.; Healthcare.gov, n.d.). The results suggest success as Levitt et al. (2016) found that the number of people enrolled in ACA has risen from 8 million in 2014 to 12.7 million in 2016. Furthermore, Glied, Ma, and Borja (2017) analyzed data from the National Health Interview Survey (NHIS) and the Behavioral Risk Factor Surveillance System (BRFSS) finding that gaining insurance through the ACA decreased the probability of not receiving medical care by 20.9-25% and increased the probability of having a usual place of care by 47.1-86.5%. Authors concluded that the ACA improved access to care while decreasing the number of uninsured Americans (Glied, Ma, and Borja 2017). While politicians took steps towards universal healthcare access for Americans through the ACA, the universal healthcare goals of these politicians have not yet been fully reached and effects remain hard to ascertain because the law is still young (Blumenthal, Abrams and Nuzum 2015). Despite the fact that an increased number of Americans gained insurance coverage under the ACA, many citizens remain uninsured. Overall, the massive healthcare expenditures of ACA have resulted in modest outcomes, not improving the United States' performance on key health measures (Schneider et al. 2017).

In addition, many expressed “substantial and justifiable concern” about the effect the administration of President Trump might have on health in the United States, including lost insurance coverage for many Americans if ACA is repealed (Galea 2017: 229). Moreover, Trump's actions decreased women's health care including preventative, reproductive and chronic disease care in domains like contraceptives, abortions and teen pregnancy programs (Brindis et



al. 2017; Charo 2017). Most notably, on December 22<sup>nd</sup>, 2017 President Trump signed the tax reform bill Tax Cuts and Jobs Act into law that repeals the ACA individual insurance mandate (Garcia 2018). The individual mandate provided incentives for young and healthy people to enroll in healthcare in order to expand the number of people paying into the pool of healthcare insurance (Saltzman and Eibner 2015). While this repeal will lower government spending on subsidies to help American citizens afford coverage, "...it is estimated 13 million fewer people in the U.S. will have health insurance in 2027 without the mandate and premiums will rise by 10 percent (Garcia 2018:1)."

In a recent study, the United States ranked last in healthcare system performance among 11 similar countries, with low rankings in access, equity, healthcare outcomes and administrative efficiency (Schneider et al. 2017). In spite of recent efforts to improve healthcare access and outcomes, the United States still struggles with the delivery of medical care insurance. While coverage increased after the enactment of ACA, the United States still ranks low compared to other countries and areas for improvement are hard to pinpoint (Levitt et al. 2016; Schneider et al. 2017). In turn, as healthcare in the United States has become more tied to corporations (e.g. pharmaceutical companies or employer health care plans), the structures of oppression and the social determinants that affect health have increased in addition to changing the way we think about disease (Brody 2017; Waitzkin 2000). For example, pharmaceutical companies have had increased lobbying and marketing influence in U.S. healthcare (Brody 2017). Moreover, employers can now decide whether to provide birth control in their health insurance policies since the administration of President Trump rolled back the administration of President Obama's mandate that birth control be provided in the fall of 2017 (Birth control benefits, n.d.; Fox News,

Singman 2017; HealthCare.gov, n.d.; National Broadcasting Company, Kodjak 2017; National Public Radio, Fox 2017).

In some cases health care in the U.S. relies on corporate employer decisions and pharmaceutical lobbying that consider broad sweeping policies instead of individual patients. While these larger economic and policy problems are important, I focus on how medical professionals can work to provide quality health care and outcomes within the United States healthcare system. In this paper, I describe anthropological theories and tools practitioners can employ to ameliorate these medical practice problems at the individual patient level in the United States around chronic illness and examine heart disease as a specific example.

### **Pressures affecting health care practice in the United States**

Western medicine, or “biomedicine”, is a system in which healthcare professionals treat symptoms or disease with surgery, pharmaceuticals or radiation, dividing healthy patients from ill patients (National Cancer Institute, n.d.; Tsuei 1978). Biomedicine applies principles of natural sciences and research to treat patients in a standardized way (Lock and Gordon 1988; Lock and Nguyen 2018). In spite of advancements in western medicine that have improved diagnosis and treatment, other pressures imposed on the healthcare system have complicated the means of providing effective care. Criticisms around medical practice in the United States have escalated. For example, concerns include physicians who do not alert patients to the risks of medical procedures, over-billing of patients, and physicians receiving tacit financial benefit from companies (e.g. pharmaceutical lobbying) because of their professional knowledge (Charon 2001).

While these accusations are merited, outside pressures (e.g. time constraints and insurance companies) on medical professionals inhibit their ability to deliver medical care.

Recent generations of physicians manage “fragmentation, subspecialization, lack of continuity, technological demands, burgeoning patient volume [and] institutional stress” (Coulehan 2003: 87), which all place constraints on the quality of care and limit the time that physicians spend with patients. A wide range of economic factors limit conversations and relationships in modern health care practice in the United States (Charon 2001). These factors include increased healthcare costs from technological development and public expectations that have constrained effective health care practice (Conklin 2002; Weatherall et al. 2006). Some argue that financial incentives persist as the key problem, with doctors paid to carry out procedures like surgery, but not to seek less invasive alternatives or provide greater levels of individual-based care (Gawande 2014). In addition, the U.S. healthcare system increasingly misunderstands patient and doctor relationships in retail terms, posing numerous problems (Gawande 2014). This retail-like misunderstanding happens at many levels, with patients, doctors and companies treating health care as a strictly business and economic exchange. Valid concerns regarding health care practice point to economic pressures on western medical practice that interfere with quality care. As a result of these pressures, the United States health system faces the following:

*millions of uninsured Americans, stark socioeconomic and geographic disparities in health outcomes, provider incentives that promote overuse of unnecessary treatments and procedures, fragmentation of services across venues of care, high rates of preventable medical errors, and an inability to address the complex needs of increasing number of patients suffering from multiple chronic diseases (Farmer et al. 2013: 332).*

Some of these critics go as far as to describe the United States healthcare system as suffering from a quality-of-care crisis that, among other things, does not address a patient’s experiences, erodes patient-physician relationships, and neglects to realize the ill patient as an actual person (Marcum 2008). In essence, the United States healthcare system has struggled with providing effective quality care, which has led to criticisms of the healthcare system overall.

Within discussions of these larger social healthcare problems, economic, structural and organizational issues remain the focus instead of other smaller-scale aspects of clinical practice such as patient and physician interactions (Mishler 1985). My research concentrates on the smaller scale aspects of clinical practice that each practitioner and clinic can contemplate and implement. Indeed, practitioners are responsible to respond to medical injustices and problems of the ill, because doing so cannot be left up to insurance and pharmaceutical industries who do not focus on the relief of suffering (Farmer et al. 2013). Insurance and pharmaceutical companies instead have interests that relate to profit. Farmer (2003) argues the problematic commodification of healthcare does not recognize health care as a human right. Instead, a greater realization of structural violence (e.g. racism, addiction, unemployment, domestic violence) that predetermines health conditions in medical practice is essential (Farmer 2003). Medicine should be tied to trust, ethics and common good instead of the self-interests of physicians, insurance plans or investors (Pellegrino 1999).

In order to inform practitioners, especially those who interact with patients as part of their practice (for example family practitioners versus radiologists or pathologists), I combine and present theories here in an anthropological context. To ground the discussion, I present theories as they pertain to chronic illness in the United States. Chronic illness patients spend a great deal of time interacting with healthcare professionals, and many chronic conditions have the potential to be managed and even improved (Mayo Clinic, n.d.; Willett 2002). Additionally, as the baby boom population ages, an increased number of patients suffer from chronic illnesses, placing greater pressure on the healthcare system to respond (Schneider et al. 2017). Although I focus on clinical practice around chronic illnesses, the theoretical framework presented here can be applied to many facets of health care when contemplating how to improve quality of care.

## **Medical Anthropology**

Anthropology has come a long way from its marred past of blindness to inequality and structural violence, labeling systems like these “culture” (Farmer 2003). Many anthropologists today realize the past mistaken practices of anthropology and have striven to understand human nature in different capacities (Delle, Mrozowski, and Paynter 2000; Farmer 2003; Hill 1992; Hymes 1974; Shankles 1998). While the ways in which some practice anthropology still mirror these marred ways, the approaches by anthropologists that realize these past mistakes I draw on here.

The combination of theories I discuss align with the holistic approach of medical anthropology and can benefit medical anthropology as a whole. In the last few decades, medical anthropology created its own theoretical framework. Medical anthropology combines social, cultural, biological and linguistic anthropology to gain insight into factors that affect health, well-being and the experience and distribution of illness (Society for Medical Anthropology, n.d.). The sub-discipline draws theory from the broader field of anthropology but has also started generating conceptual and methodological advances on its own (Singer 1992). Increasingly, medical anthropology includes interdisciplinary interaction that brings about biocultural synthesis which anthropology strives for as a discipline (Sargent and Johnson 1996). The combination of theory here aligns with this interdisciplinary work that medical anthropologists use to create theories. There is great potential to combine biomedicine, which applies the principles of natural sciences, and anthropological tools, such as ethnography involving observation or interviews (Whitehead 2002).

Medical anthropology can address the problem concerning a lack of biocultural integration for studying health and disease (Greene 1992). A biocultural approach integrates

biological and cultural anthropology theories and methods towards a critical and productive dialogue around questions in anthropology (Hruschka, Lende, and Worthman 2005). This biocultural found in medical anthropology provides holistic frameworks to understand individuals and their relationship to their cultural environment (Hruschka, Lende, and Worthman 2005). A biocultural approach that integrates information spanning different disciplines can offer valuable information and perspectives when considering cases that cross traditional academic boundaries (Hruschka, Lende, and Worthman 2005). This integrative biocultural approach within medical anthropology provides suitable methods for considering problems in the complex system of U.S. healthcare.

Anthropological research in medicine presents a truly revolutionary form of inquiry that can combat negative social determinants of health (Sargent and Johnson 1996). Anthropology can present an ethnomedical perspective that looks at the process of defining disease and the social response to disease, as well as the environment that could be causing the disease (Singer 1992). The broadly focused training of medical anthropologists allows them to avoid adverse outcomes that people working in the narrow focus of an economic or biomedical frame do not see (Foster and Anderson 1988). A narrow focus can cause physicians to miss aspects of an individual's illness like contributing factors to their condition or how patients are unable to carry out certain treatment options. For example, practitioners focused on biological measures (e.g. blood pressure, cholesterol levels, MRIs) may miss substantial lifestyle contributors such as smoking habits or diet that the patient should be encouraged to change. In a similar way, with a narrow concentration the practitioner may not realize that patients cannot comply to a medication or exercise regimen if they have constraints like homelessness, are a non-native English speaker, live in a food desert or work multiple jobs.

Medical anthropologists research social, physiological and biological factors to understand unique experiences of individuals and groups (Womack 2010). In the past, medical anthropologists argued for change in biomedical care (Manderson and Smith-Morris 2010). These proposed changes include insights like how structural violence, gender, ethnicity, age or class compound on one another and are further compounded by chronic illness (Manderson and Smith-Morris 2010). Although health services researchers studied solutions for the biomedical health system, approaches that strive for multidisciplinary evaluations fail by neglecting to use or develop underlying social science theory (Ferlie et al. 2016). Anthropology can help in this aspect with a multidisciplinary approach that recognizes many aspects of a problem and combines approaches and solutions.

### **Theories and methods in anthropology applicable to medicine**

Theories developed by researchers in anthropology's sub-disciplines (archeology, biological anthropology, cultural anthropology and linguistics) can provide insights into practice when applied to treating chronic disease. Theories put forth general principles to explain or guide analysis of a phenomena (Moberg 2013). Broad theories used by anthropologists make generalizations like medical practitioners do when applying their knowledge base to a patient (e.g. prescribing medication that correlates with a patient's diagnosis or applying past patient experiences to a new patient). However, anthropological theories also lend themselves to understanding an individual. The blend and variety of approaches in anthropology discussed below can inform how medical practitioners can combine approaches for a more successful treatment of chronic diseases.

Tools like ethnography and considering the subjectivity of an individual in anthropology can help a medical practitioner's focus on a specific patient with a chronic disease.

Anthropologists recognize subjectivity, acknowledge preconceptions, and gather detailed information is the focus in anthropological research. Additionally, anthropologists sometimes place themselves in the group or individual they study (Barry 2005; Smith 1978; Whitehead 2002).

Because anthropology integrates a variety of methods that include tools found in social science and science, anthropology can offer valuable insights into care for chronic diseases. While practitioner's repertoire includes big picture scientific methods and facts (e.g. prescription drugs, MRIs, established diagnoses), practitioners lack methods that include a social science perspective and therefore more individualized viewpoints in practice and education (Cuff and Vanselow 2004; Lief and Fox 1963; Tabatabael, Yazdani and Sadeghi 2016). Medicine cannot be purely a science because medicine aims to promote health through the prevention and treatment of disease while science aims to acquire knowledge and evaluate theories not only connected with medicine (Munson 1981). As mentioned above, anthropology as a discipline was not always practiced in the most ethical ways, however combining positive qualities of biomedicine and anthropology can help practitioners make strides towards optimal care. Therefore, practitioners can learn from anthropology's combination of a variety of methods and theories to improve care for chronic conditions. An anthropological approach captures the complex nature of humans, whereas medical practitioners focused only on broader scientific findings can miss key details and nuances about an individual patient.

### **Ethnography as a tool to recognize all facets of illness**

Ethnography can be employed when evaluating medical practices in order to identify causes of illness and treatments that are not always found or quantifiable in a biomedical model. Anthropologists use ethnography to gather information through observation and interviews,



employing both qualitative and quantitative methods (Whitehead 2002). Ethnography can capture factors and measurements of a person's illness that are not purely quantitative, for example how a person's resources contribute to their illness or improvements in their condition such as the ability to do more around the house (Barry 2005). Biomedicine applies principles of the natural sciences, especially biology and biochemistry and is based on standard, protocols and algorithms (Lock and Gordon 1988; Lock and Nguyen 2018). Biomedicine often concentrates on generalized treatments to diseases and the application of research to diagnose and treat patients. Quantifiable measurements like blood pressure, x-rays, MRIs or heart rate are used.

Even with carefully designed scientific trials including large sample sizes, trials typically only measure a few symptoms or treatment effects (Barry 2005). In addition, health measurements often include a minimal number of factors and compared to population statistics for diagnoses and treatment. For example, Body Mass Index (BMI) is a number calculated from an individual's weight and height that places people into underweight (BMI < 18.5), healthy (BMI 18.5-24.9), overweight (BMI 25-29.9), obese (BMI > 30) categories (Centers for Disease Control and Prevention, Defining Adult Overweight and Obesity, n.d.). From these categories, many studies maintain that individuals who do not fall into the "healthy" BMI category have higher mortality rates (Cornani-Huntley et al. 1991; Diehr et al. 1998; Dowsey et al. 2018; Garrouste-Orgeas et al. 2004).

However, BMI does not consider fat or muscle composition, so people with a great deal of muscle may be classified as obese (Brierley et al. 2016; Rothman 2008). Olympic athletes, arguably at the peak of fitness and health, can have a range of BMIs that fall out of the healthy range: Laura Zeng-Rhythmic Gymnastics (16.8 BMI), Abdi Abdirahman-Track and Field distance runner (18.1 BMI), Emma Coburn-Track and Field 3,000m Steeplechase (18.2 BMI),

Chris Brooks-Artistic Gymnastics (25.1 BMI), Alfred A.G. Kruger-Track and Field Hammer Throw (31.6 BMI), Aretha Thurmond-Track and Field Discus Throw (33.7 BMI) (Team USA Rio 2016 Olympic Games, n.d.; USA Track & Field, n.d.). Furthermore, Gómez-Ambrosi et al. (2012) in a study of 6,123 subjects (924 lean, 1637 overweight, 3562 obese) found that 29% of people categorized as lean and 80% of people categorized as overweight had body fat levels associated with obesity. Since BMI does not take into account body composition, ancestry or gender, is it a generalized measurement that labels people at certain health risks regardless of their body type or lifestyle. These labels can be incorrect and lead to negative psychological consequences, of which Essayli et al. (2017) observed when they labeled healthy weight or overweight college women “overweight.” While general measurements like BMI are useful and sometimes necessary, practitioners need to recognize their limits in diagnosing conditions and predispositions to disease. Sometimes, a wide variety of measurements, symptoms and treatments need to be considered instead.

Additionally, the results of scientific trails can be affected by social factors such as institutional racism and modern cultural ideals (Barry 2005). The underlying causes of human disease and treatments cannot always boil down to a specific statement or phenomena in the way that chemical formulas can. Many lifestyle, cultural and social factors can muddle the broad application of certain causes and treatments. For example, social determinants of health such as low socioeconomic status, historical racism or access to healthy foods are not incorporated into textbook type definitions of diagnoses and treatments for diseases, yet they have an impact on health (Farmer 2013; Farmer 2003; Farmer 1999; Gallagher 2010; Gluckman and Hanson 2004; Woolf et al. 2007).

Factors such as research trial funding, pharmaceutical influence, cost-effectiveness of treatments, or decisions of resource need to be realized as possible biases (Barry 2005). Furthermore, trials and research can be hard to generalize to a condition. For example, studies have found that 10% of people with hypertension have an uncomplicated version, so guidelines that were developed for these 10% do not apply to 90% of hypertension patients (Tudor-Hart 1993). Overall, studies that examine depression or stress call for more complex models of accessing types of heart disease (Steptoe and Whitehead 2005). It is essential to make generalizations, and use scientific methods for research, but only while considering other methods of treatment in follow-up research or specifically catered to an individual.

While a biomedical approach provides a basis for treatment, there are measures of treatment that are not purely physiological measurements. If a patient feels better, has the ability to do more around the house or does not feel as burdened by a chronic illness, these are all improvements that matter but cannot necessarily be measured physiologically (Radley 2002). Ethnography provides a device that can measure differences that are not purely biologically based. Anthropologists use ethnography to gain information about a culture through qualitative or quantitative methods like observation and interviews (Whitehead 2002). In the same way, these methods have potential for aiding in compiling information about an individual. These methods can provide medical evidence without a concentration on a direct scientific approach. Ethnography can incorporate features of interaction that will give the practitioner more information, because ethnographic research happens in real life settings with the observer situated in the context instead of researching from afar (Barry 2005). Because the focus of research is not completely predetermined and tightly structured, more potential for new interpretations that do not follow accepted phenomenon present themselves (O'Connor 2002).

Ethnographic research would offer valuable information about the interaction between a specific patient and their specific practitioner (Barry 2005). Because ethnography allows for other forms of acceptable evidence, it could be a valuable device to study causes and the effects of treatment that are not strictly biological or are biological but unable to be assessed through standard research protocols.

### **Evolutionary Theory and Medicine**

Looking at chronic disease from an anthropological evolutionary standpoint can offer valuable insights in causes, treatments of disease and in the education of practitioners. Anthropology strives to understand humans not just from present observations, but within an evolutionary framework such as in the field of primatology or paleoanthropology. Evolutionary theory can point to possible mismatches between how humans evolved and our current environment that can lead to chronic illness (Eaton, Konner, and Shostak 1988; Stearns and Medzhitov 2015; Stearns et al. 2010; Trevathan, Smith, and McKenna 2008). Evolutionary theory as it pertains to humans also embraces a biocultural model of evolution that examines the interplay between cultural and biological adaptations. Well-developed critiques of the biomedical model and how influential culture can be in treatments are also supported by evolutionary theory (Hood and Jenkins 2008; Trevathan, Smith, and McKenna 2008). Ultimately including evolutionary theory within anthropology in medical practitioners' education and treatment research is capable of improving medicine in the United States.

### **Mismatches between evolved physiology and modern lifestyles**

When considering chronic illness, evolutionary theory provides insight into whether a mismatch between evolution and environment contributes to the chronic medical condition. Differences between our evolved physiology and the typical Western diet, sedentary lifestyles,

access to alcohol and nicotine, and high intake of processed fats and sugars have challenged our digestive system's ability to balance energy storage and consumption and therefore led to a variety of chronic conditions (Eaton, Konner, and Shostak 1988; Stearns and Medzhitov 2015; Trevathan, Smith, and McKenna 2008). These "mismatches" in modern food and exercise habits contribute to increases in conditions like type 2 diabetes, atherosclerosis, hypertension, some cancers, diverticular diseases, and osteoporosis (Eaton & Konner 1985; Eaton, Konner, and Shostak 1988). Additionally, the domestication of animals that have higher fat content than wild animals contributes to obesity, heart disease, cancers, cardiovascular diseases and type 2 diabetes (Trevathan, Smith, and McKenna 2008). Furthermore, repeated exposure to toxins (e.g. air pollutants, smoking, metals in food) significantly increases the risk of cancer by placing proliferative and oxidative stress on tissues, damaging DNA and increasing the risk of frequency of mutations (Kampa and Castanas 2008; Lars 2003; Trevathan, Smith, and McKenna 2008). Moreover, adaptation to hard exercise for travel and hunting or adaptations for unpredictable sodium and freshwater, may now be a factor contributing to heart disease with these realities reversed if the patient leads a more sedentary lifestyle (Trevathan, Smith, and McKenna 2008). Although we have been constructing our niche for a long time, "diseases of civilization" result because large factors in our current niche (e.g. sedentary lifestyle, high amounts of sodium in food) were constructed too recently for the possibility of beneficial adaptations to present themselves (Eaton, Konner, and Shostak 1988; Hood and Jenkins 2008; Stearns and Medzhitov 2015). While natural selection can act on chance genetic mutations to produce adaptations, selective pressures can change as environment changes and cause some adaptations that were beneficial to the human species to no longer act as beneficial, like efficiency in fat storage for

prolonged fasting and exercise. Although chronic medical conditions have a plethora of complex causes, evolutionary theory can provide a framework for understanding some phenomena.

### **Symptoms as by-products of larger health problems**

Evolutionary theory's recognition of natural responses and defenses aids in understanding many processes of illness. Sometimes, discomforts like an itch, pain, or inflammation are part of the body's complexly evolved immune system (Hood and Jenkins 2008; Trevathan, Smith, and McKenna 2008). For example, researchers have suggested fever as a way to raise the body's temperature in order to block the activity of infectious agents (Trevathan, Smith, and McKenna 2008). Similarly, inflammation acts as an effective natural defense mechanism in our bodies (Powers and Howley 2015).

Inflammation removes damaged cells and tissues and allows tissue repair (Powers and Howley 2015). Without enough inflammation, tissue destruction can occur (Power and Howley 2015). However, too much inflammation can cause different diseases like periodontitis or rheumatoid arthritis. For this reason, the body carefully keeps inflammation in balance (Powers and Howley 2015). When exercising, structural damage to the muscle fibers occurs, followed by membrane damage, calcium leakage from the sarcoplasmic reticulum, protease activation, inflammatory response and then edema and pain (Powers and Howley 2015). Inflammation assists tissue remodeling and supports muscle building (Powers and Howley 2015).

However, while anti-inflammatory medicine has uses in alleviating injuries, there is the potential of unnecessary use or misuse in order to decrease pain. The use of anti-inflammatory medicine can interfere with the body's natural inflammation. Non-steroidal anti-inflammatory drugs (NSAIDs) are widely used but can create adverse side effects (Cryer et al. 2016, McGettigan and Henry 2013). For example, people with a high risk of cardiovascular diseases

should avoid NSAIDs because they can escalate the risk of strokes or heart attacks, specifically three drugs (rofecoxib, diclofenac, etoricoxib) which are correlated with cardiovascular risk (McGettigan and Henry 2013). Looking at symptoms such as inflammation as part of our evolved immune system can help find the problem that the symptom stems from instead of utilizing prescription drugs that could lead to other health complications.

Morning sickness is another example of a symptom that may be an evolved health benefit. During pregnancy, 75% of women experience “morning sickness”, nausea and vomiting, and food such as poultry, eggs, fish, and meat evoke the strongest responses (Badell, Ramin, and Smith 2006; Hood and Jenkins 2008). Pathogens are most commonly found in these foods so morning sickness may be guarding against the embryo’s exposure to these pathogens (Hood and Jenkins 2008). Moreover, morning sickness most commonly occurs in the first and third trimesters, when the embryo is at key developmental stages (Flaxman and Sherman 2000; Hood and Jenkins 2008). Therefore, morning sickness may protect the embryo from pathogens during key developmental stages.

Instead of treating any disturbances in the body as problems to immediately cure, some symptoms may help larger health problems. Medical treatments can make patients feel better in the short term, but this can result in targeting the body’s own defenses that would benefit the person in the long run such as inflammatory responses (Trevathan, Smith, and McKenna 2008). Trevathan, Smith and McKenna (2008) maintain that an evolutionary perspective is crucial, because humans have developed a robust immunological defense system efficient for short-term problems like infectious diseases but remain vulnerable to the long-term progression of chronic disorders. Evolutionary medicine strives to not overemphasize one cause or treatment, and to avoid simplifying the complex process of chronic illness into one explanation (Trevathan, Smith,

and McKenna 2008). An evolutionary framework allows us to recognize symptoms that indicate larger problems, complex causes and treatments and how chronic conditions evolve.

An evolutionary framework can teach practitioners to look for a bigger picture including the “whats,” “hows,” and “whys.” Arguably, medical textbooks are often limited to catalogues of clinically relevant information that lack explanation or information about the humans affected by the illnesses (Trevathan, Smith, and McKenna 2008). It remains essential to delve into a framework that provides a broader outlook on a condition, rather than treating chronic illness with a list of relevant information that only considers the present condition instead of contextual information about the past or lifestyle. The holistic way that anthropologists look at human phenomena within the context of evolution helps to understand the bigger picture of a chronic illness.

### **The power of culture in mediating health and treatment**

Evolutionary theory serves as a useful tool to examine the power of culture on biomedicine, sometimes seen as a purely scientific discipline. Many serious criticisms of the Western biomedical model involve the disregard of the patient’s state of mind or the patient as an individual (Trevathan, Smith, and McKenna 2008). Evolutionary medicine provides an approach that better acknowledges the individual and culture. For example, culture’s impact was exemplified when for half a century Western society’s citizens, companies and scientists believed that artificial milk and formula were better than species-specific human milk (Feldman 2011; Trevathan, Smith, and McKenna 2008). However, breastfeeding contains nutrients for growth and an amount of immunity to diseases, and research suggest it may aid in social and cognitive development (American Academy of Pediatrics 2005; Feldman 2011; Ferguson and Molfese 2007; Gerrish and Menella 2000; Kramer et al 2008) In addition, suggestions like



sleeping away from infants and not breastfeeding are based on some Western cultural values and ideologies rather than scientific studies, and the suggestions do not consider evolutionarily adaptive behaviors (McKenna and Gettler 2015; Trevathan, Smith, and McKenna 2008).

It also stands important to examine of the influence of culture on how ethnicity and “race” are used in research and clinical settings. For example, a study found a correlation between interpersonal racism in African American mothers’ lives and low birthweight preterm infants, concluding that accumulated experiences of racial discrimination present a risk factor for preterm delivery (Collins et al. 2004). Additionally, accepted ideas about race has been heavily affected by a variety of traditions around science, politics, philosophy and other disciplines. Unconsciously scientists’ ideas about social order, natural and social hierarchies, progress, purpose or the nature of race have defined what scientists study and the theories they put forth (Stepan 1982). Because medical records commonly report ethnicity and race, they are commonly used in tandem with genetic studies. However, “race” is not solely genetic and represents predispositions to disease, including historical differences in socioeconomic status, nutrition or cultural setting (Bloche 2004).

In these ways, culture exerts a powerful influence, even if biomedicine and science have a tendency to neglect it in their focus on empiricism and minimizing biases. Trevathan, Smith and Mckenna (2008) go as far to say that social and cultural context constrain any conceptual contribution of biology or medicine. Biomedical tools that are scientifically based should be applied, but only while recognizing cultural and social factors. Evolutionary theory within anthropology can be crucial in not only providing a historical context of adaptations, illness and symptoms, but in recognizing the power of culture. Practitioners employ biomedicine for

scientific information but need to also recognize factors that are not generalized about an individual or a culture's effect.

### **Inequalities, Structural Violence and Human Rights in Health Care**

The commodification of health in the United States has detrimental effects for many demographics. The American idea of the free-market as the ideal system to drive the distribution of goods and services cannot be transferred to medicine (Pellegrino 1999). Because the commodification of health reflects the capitalist system, it emphasizes reductionism in medicine and interferes holistic practice acceptance (McKee 1988). Medicine treats a human condition or disease, and therefore intertwined with individual trust, ethics and common good and serves those interests instead of the self-interests of physicians, insurance plans or investors (Pellegrino 1999). This commodification of healthcare holds that inequalities of services and treatments are not the responsibility of the free market and that inequalities are unfortunate but not unjust (Pellegrino 1999). Overall, the commodification of healthcare makes us question whether we see healthcare as a basic human right (Farmer 2003).

Addressing additional problems with the United States healthcare system, structural violence can have powerful effects on who gets sick and their treatment. Structural violence can include racism, addiction, lack of insurance, lack of employment, lack of stable housing and domestic violence (Farmer 2003). Poverty and racism can exacerbate dire outcomes for sick people because it can restrict access to treatments or make treatments less effective if the patients struggle with substance abuse or are malnourished (Farmer 1999). For example, a study comparing mortality rates between people with lesser education and college-educated people concluded that eight times as many deaths would have been avoided from 1996 to 2002 if the population with inadequate education had the same mortality rate as the population with higher

education (Woolf et al. 2007). In this study, education stood in for socioeconomic status, because the two often remain closely correlated (Woolf et al. 2017).

Additionally, poverty interferes with a patient's ability to comply with drug regimes, and overestimation of ability to comply while underestimation of constraint happens (Farmer et al. 2013). Not only can structural violence and social factors inhibit access to treatments, but they also can limit ability to comply and the effectiveness of the treatments. These inequalities translate into predispositions to illnesses and “fundamentally social forces and processes come to be embodied as biological events (Farmer 1999: 14).” While seemingly non-compliant patients are difficult to work with or motivate, understanding structural violence and constraints the patient may have can help the practitioner to tailor treatments to meet their constraints. Some patients are hard to motivate but placing treatments within their reach ensures that patients have the choice to comply, instead of placing treatment plans outside of their resources.

Besides structural violence, other factors should be examined during diagnosis and treatment. Cultural norms around high levels of stress or lack of social support can put people at risk for disease (Cohen, Gianaros, and Manuck 2016; Dressler 1979). For example, depression, hypertension and arteriosclerosis, along with cardiovascular disease in general are diseases influenced by negative emotions and stressors (Bacon 2018; Dressler 1979). Furthermore, local religious practices can affect whether people seek care and follow treatments prescribed (Farmer et al. 2013). For example, traditional healing practices in Africa conclude that a person infected with malaria has been possessed, and this belief could interfere with treatment, since the belief holds that they will die when taken to the hospital (Maslove et al. 2009). Beliefs need to be taken into consideration to address how they could affect diagnosis and treatment. Conversely, in the United States, “medical militarization” urges Americans to fight a disease head-on (e.g. a

common phrase around breast cancer is “fight like a girl” or the reference to the “fight against AIDS”) instead of using the social, political and economic conditions that can influence the disease (Lock and Gordon 1988). The incorporation of culture and beliefs is key rather than only using a purely science-based approach.

Anthropologists can help understand these social factors and advocate for consideration of such factors in medicine. While biomedicine has made extensive scientific progress, social roots have been neglected (Farmer 1999). Warm and caring rapport is necessary for effective care and can help to level the “experience-distant” models of sociology, political science and economics (Farmer 1999). In general, medicine, public health and the social sciences together offer a great deal to contribute to debates on human rights (Farmer 2003). Scholarly work must examine dynamics of health, the effects of war and political-economic disruption on health, and the pathogenic effects of social inequalities like racism and gender inequality can have over a life time (Farmer 2003; Gluckman and Hanson 2004). These multidisciplinary approaches can help to elucidate social factors on a broader scale, but also help practitioners to think about these factors in everyday practice. Farmer cites the valuable asset anthropology can provide in understanding social and cultural factors in health care and for examining how to make medical care more humane.

### **Narrative and Humanistic Medicine**

Narrative and humanistic medical models can inform medical practice surrounding chronic illness in the United States. While these two models are different schools of thought, each advocate for practitioner’s fostering skills to recognize aspects of an individual’s disease. Both models strive to incorporate more information about the individual instead of relying on objective diagnoses. Narrative medicine cultivates listening and interpretation skills to

understand the patient's illness experience. Humanistic medicine emphasizes the patient as a whole person, fighting the fragmentation of the patient's body part into separate part instead of an integrated whole. These models offer tools for medical practitioners that follow an anthropological approach, striving to refrain from making generalizations and biases initially. In both humanistic and narrative medicine, knowledge accumulation happens in the same process knowledge is acquired in ethnography, and information that is not purely biological measurements can be compiled.

### **Anthropology and Foucault's Medical Gaze and Biopower**

The idea of incorporating the whole body into practice connects with methods used by anthropologists to regard people as individuals. Instead of objectifying or separating out a diseased part, narrative and humanistic medicine strive to understand specific factors about the individual. These approaches reflect the term "medical gaze," coined by Michel Foucault. Foucault (1963) maintained that devices that made it possible to analyze the body also created a power structure between practitioner and client. Foucault's "medical gaze" referred to the separation of a patient's body from the actual person. The physician analyzes the patient in an objective approach, looking for signs that lend themselves to finding a cause and treatment for the illness (Foucault 1963). Using modern imaging technology like x-rays and MRIs remains helpful and even crucial, but they add to medical gaze that does not see the patient as an individual. This medical gaze defines the patient as their illness rather than as a person. For example, if a practitioner stereotypes a heart disease patient from their cholesterol levels and body weight index instead of considering the specific patient's lifestyle and constraints, the practitioner applies disease information without considering the patient. Similarly, relying too much on an MRI image when treating a herniated disk can neglect information about the

patient's lifestyle that lead to the herniated disk. While technology and a scientific knowledge base are essential, it is also important to shed the medical gaze in order to realize the patient as an individual.

Furthering this concept, Foucault's term "biopower," refers to how power manages large groups of people (Foucault 1984). He applied this theory to public health, asserting the possibility that risks of groups are controlled in health practice. Examples of biopower can include conventional ideas of well-being or health as well as cultural norms like reproductive or hospital practices. Theories presented by narrative and humanistic medicine that call for a humanizing approach in order to understand the patient reflect ideas about medical gaze as a dehumanizing force and biopower putting some groups at a greater health risk. In this aspect, anthropology can help to understand the individual by taking into account the medical gaze and biopower.

### **Narrative Medicine**

Narrative medicine aims to recognize culture and the individual and tries to combat objectivity by incorporating subjectivity into medical practice. A narrative practitioner strives to understand the unique and complex story of a patient's illness (Charon et al. 2016). Medicine could be purely biochemical or physiological, however it remains impossible to take away cultural images and meaning intertwined with the patient's experience and the practitioner (Sontag 1970). In other words, medicine cannot be purely objective, because cultural elements are deeply connected with how a patient experiences their illness, and in how the practitioner carries out care. Each patient with a serious illness has a complex combination of personal, religious, cultural, and media-based beliefs about their condition, which can be either positive or negative, and they can contribute to the healing process or delay it (Coulehan 2003). Attention

needs to be paid to cultural factors in order to deliver effective care for chronic illnesses. The emotions and beliefs of patients have been documented as significant in psychoneuroimmunological studies to treatment, which displays the importance of examining cultural factors. (Pert 1999). If we champion a philosophy of medicine that rests on the belief that medicine rests above or beyond culture, the practitioner's quality of care is reduced (Coulehan 2003).

However, biological approaches stand critical to many aspects of care. In this way, narrative medicine and approaches that consider culture help to tailor treatment to an individual. For example, the prescription of mindfulness medication has garnered criticism from patients and professionals alike, because of the spread of misinformation around mindfulness meditation and its replacement for forms of treatment like psychotherapy (Van Dam et al. 2018). Both culture and biology are important to consider when treating a patient, but ultimately listening to and understanding the patient's concerns in diagnosis and treatment is principal.

Additionally, narrative medicine points out how technological advancements can hinder practitioners. Those who work in the medical field need to be careful not to replace communicative and symbolic interactions with purely scientific interactions (Habermas 1970). While scientific information is key, gaining information about a certain individual's case and encouraging patient compliance requires human interaction. As highly social creatures, interpersonal communication is paramount for every aspect of human personal development (Feldman 2011; Konner 2002). For example, Charon describes a case where a patient burst into tears after talking with her, because a medical professional had never taken the time to communicate with her about her illness (Charon 2008). Health care practice needs to hold this social aspect of human nature as a high priority. The patient-physician relationship should be a

fundamental aspect of any care situation (Gallagher 1978). An individual's culture and conception of their illness cannot be separated from their diagnosis. Therefore, realizing how intertwined an individual's subjective experience and culture are with their chronic illness is valuable. Medical practitioners in narrative medicine strive to include the patient's culture and subjectivity into their treatment.

Narrative medicine employs devices to understand the subjectivity of a patient's experience. These devices include cultivating the capacity to understand, listening skills, refraining from objectification, observation skills or general communication skills. These valuable devices for narrative practitioners can be cultivated by practicing close reading skills in order to understand the unique patient before them (Charon et al. 2016). The goal of the narrative practitioner includes cultivating the skill to receive the story of the patient and to recognize, absorb, interpret and to feel moved to action by their story (Charon et al 2016). Ignoring the subjective factors leads to an objectification of the patient that does not consider the real-life contexts of their illness (Mishler 1985). Practitioners are taught to be emotionally detached, which can interfere with their ability to cure (Coulehan 2003). Emotional detachment stems from medicine's tendency to strive for universality and replicability, which mutes doctors' ability to realize the power of singularity, observation and description (Charon 2008). However, the accuracy of scientific observations rarely needs to be disputed in medicine; instead, the narrow focus of interest to only biological facts needs to be contested (Charon 2008).

Medical professionals should accept a person's singularity as a bonus to effective care but not as a risk to objectivity (Charon 2008). Understanding the individual does not need to replace a scientific approach, but instead fostering and applying skills that will improve recognizing a person's singularity along with practical skills will provide the most effective care.



The medical profession should strive to combine tenderness with steadiness (Leake 1975). Skills like humanism, professionalism, communication, evidence-based practice and social responsibility should be merged to provide effective care (Coulehan 2003). A practitioner's ability to use a patient's information depends on their interpretive accuracy, absorptive powers, characterological tendencies, the doctor-patient relationship and their bank of similar accounts and related experiences (Charon 2008). Within narrative training, clinical imagination, empathy, awareness of ethics and attention have been suggested as valuable traits to cultivate (Charon 2008). Overall, developing these narrative skills will help supplement objective practice with subjective information about the individual.

### **Humanistic Medicine**

Humanistic medicine strives to maintain human interactions in medical practice and to refrain from viewing patients as composed of mechanical parts (Marcum 2008). Instead of looking at disease as a malfunctioning part, humanistic medicine maintains that diagnosis should incorporate culture, the whole person, and experiences of illness (Marcum 2008). Humanistic medicine, along with narrative medicine and Foucault's theoretical framework, provides insights into United States health care problems by emphasizing the individual. These frameworks mirror anthropological practices like ethnography that can garner a rich amount of information about an individual.

In medical practice, it is important to think of a person's chronic illness not as a diseased part that makes the body malfunction. Instead, the key is to look at disease in a whole-body sense. In the prevailing biomedical model, the patient is reduced to a physical body like a machine, made up of individual body parts separate from any background or framework (Marcum 2008). In this model, the physician's job is to use the latest scientific and technological

advances to treat or replace the body part while remaining emotionally detached (Marcum 2003). While practitioners do not always embody this emotional detachment that Marcum (2003) posits, sometimes it persists as a salient trend in some disciplines (i.e. cancer treatment or surgeons who briefly see patient) of medical practice. This mechanistic outlook reflects the values of objectivity, precision and standardization in biomedicine (McWhinney, 1978). However, the actual person vanishes in the gaze of the physician when the body is broken down into a collection of parts (MacIntyre 1979). The outer body of the patient becomes transparent with the combination of the medical gaze and gaze of machines for diagnosis (Toombs 1993). This view leads toward privileging what technology says about the diseased part over what patients say. Practitioners often trust the findings of machines over what the patient says about their illness (Marcum 2008). In addition, biomedical practitioners have a tendency to assume a superior position without translating medical jargon and concepts to the patient (Marcum 2008).

With as many as 80% of patients in the public hospital settings lacking health literacy, more than 40 million Americans are estimated to have poor health literacy (Kirsch et al. 1993; Williams et al. 2002). Patients have trouble understanding consent documents, medication directions, and vocabulary such as “orally”, “malignant” or “terminal,” each in the top 50 most commonly used health words in physician-patient interviews (Samora, Saunders, and Larson 1961; Williams et al. 2002). Additionally, Davis et al. (2001) found that words used in cancer screening like “polyp”, “lesion”, “tumor”, “screening” and “colon” were poorly understood. The results the researchers found exemplify the need to ensure patients understand the jargon and concepts put forth by practitioners.

Contrary to the current biomedical model, humanistic medicine views the patient as a person within a socio-economic environment and cultural background. The patient represents not

just a sum of separate parts, but instead has properties that surpass the summation of those parts (Marcum 2008). Instead of treating the patient as a diseased body part, practitioners need to realize the whole person including other dimensions of the patient that are not just physical (Switankowsky 2000). Humanistic medicine sees the patient an integrated whole within their environment, including psychological or spiritual effects (Marcum 2008). This approach can aid in finding the causes of a chronic disease for a certain patient. Biomedical practitioners often subscribe to the idea that people with the same disease have the same illness or sickness. But the majority of diseases are not caused by any one factor but due to multiple causes (Rizzi and Pederson 1992). Instead of a generalization, medical practitioners should incorporate environment, culture and multiple causes into diagnosis and treatment of each individual person.

To gather complete medical information, practitioners need to approach the patient as a person with multiple factors contributing to their illness including environment and culture. Fatal errors can result when the practitioner does not comprehensively understand the patient. Medical error stands the eighth leading cause of death in the United States (Zhang et al 2004). These mistakes can come in a variety of forms including representative, attributive, and affective errors (Marcum 2008). Representative error can happen when practitioners apply a stereotype to a disease, such as not as readily diagnosing a heart attack to a person who appears to be fit (Marcum 2008). Attribution error occurs when a practitioner notices a lifestyle behavior and attributes the disease to this behavior, like assuming a patient has liver cirrhosis if they smell of alcohol (Marcum 2008). Affective errors can occur when the practitioner avoids a diagnosis because they are fond of a patient (Marcum 2008). Developing accurate communication, interpretation and observation skills that a narrative and humanistic practitioner has will help in

avoiding these errors. While generalization and a bank of knowledge are necessary for diagnosis, listening to an individual patient's case helps to avoid errors.

Considering this further, humanistic medicine maintains the importance of realizing the patient's whole human experience with their emotions, and to including the patient as an active participant into practice. Emotions and intuitions can be combined with the biomedical model in order to access information that may not be found in quantified data like laboratory results (Marcum 2008). In a similar way, with the patient involved in the healing process, better outcomes are reachable. In humanistic medicine the patient acts as an informed cognitive agent (Marcum 2008). Contrary to biomedical paternalism, informed and involved patient will become active participants and will be able to work with the medical practitioner for their own healing. Employing emotions and collaborating with the patient can work towards effective care that incorporates not just quantitative information but other factors as well.

Many students in medical professions enter the field with a desire to help people, but instead are taught to distance their emotions, which can lead to burnout (Remen 2002). Instead of stifling the human interaction and emotional parts of practice, these aspects should be fostered as a way to garner more information from a patient. While a practitioner honing their skills to gather a patient's narrative provides access to new information, it does not necessarily lead to the affective errors that happen when practitioners are fond of the patient. Practitioners that have effectively developed their narrative skills are able to gain information from their patients without letting affection interfere with their diagnosis and treatment. Practitioners can use human interaction and emotion to understand a variety of factors about the patient without missing diagnoses or becoming blinded by affection. Viewing the body as a whole will help to understand patients in their many contexts and nuances, instead of just as a diseased body part.

Overall, an integration of different factors about the specific patient with an extensive base of medical knowledge will ensure a sound medical decision (Kassirer et al. 1998).

### **How alternative medicine could supplement biomedicine**

When considering ways to provide optimal medical care, intersections between biomedicine and other forms of care must be regarded. While the exact definition of alternative care remains controversial, the rough definition follows as medical treatments that are used instead of traditional or mainstream therapies and are not currently considered part of conventional medicine, including remedies such as massage therapy, magnet therapy, spiritual healing, herbal medicine, acupuncture or chiropractic medicine (Angell and Kassirer 1998; U.S. National Library of Medicine, n.d.; Web MD: What Exactly is Alternative Medicine?, n.d). Knowledge about alternative care can be necessary in treatments to avoid negative interactions between forms of care people receive like alternative remedies or medications that can interfere with conventional prescriptions (Ben-Arye et al. 2015). In addition, alternative care should be integrated into biomedical practice so that social and cultural factors are also considered in the various treatments provided. Competition between traditional or alternative medicine and biomedicine exists worldwide and therefore it remains crucial to study both and their integration in medical anthropology (Adler 2002; Logan and Hunt 1978; Wardle and Adams 2014).

Various approaches to medicine can and have been utilized in conjunction with the scientific evidence focused healthcare system. Ignoring alternative medicine poses potential conflicts between therapies that could be dangerous. For example, researchers assessing interactions around cancer found herbal medicines that people were taking interfered with anticancer drugs and the response of cancers cells to chemotherapy (Ben-Arye et al. 2015). Without quality communication, modern western medicine practitioners cannot know about

dangerous interactions between prescriptions from different practices (Coulter and Willis 2004; Wardle and Adams 2014). With the potential for many patients to be using alternative medicine, medical practitioners need to be aware of interactions between a patient's other forms of treatments. A 2000 study found that 52.1% of participants used at least one non-medically prescribed alternative medicine (excluding calcium, iron and prescribed vitamins), that 23.3% visited at least one alternative practitioner and that 57.2% of users had not told their doctor. The most common alternative practitioners listed included acupuncturists, reflexologists, aromatherapists and herbal therapists. If practitioners do not know the alternative treatments a patient is consuming, treatments could interfere with biomedical treatments, for example some herb usages are listed as risk factors for heart disease and could react with biomedical heart disease treatments (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). Most respondents that used alternative medicines noted that a standardization of product information and content would be helpful (MacLennan et al 2002).

In another study of integration, patients of traditional medical practitioners and hospitals interviewed about how western medicine and traditional practices fit together in Ngaoundere, Cameroon. While Cameroon's healthcare system is very different the United States' healthcare system, patients concerns and opinions about balancing traditional practices and hospitals applies to populations in the U.S. that employ alternative medical practices. Most of the patients interviewed believed that the two had different strengths, which they balanced when deciding where to obtain medical help. Furthermore, the majority believed that health professions should play a larger role in the integration of the two by understanding both types better (Hardy 2008). With these results and the prevalence of alternative care usage, practitioners need to ask about what alternative forms of care a patient receives.

An ethnographic approach facilitates this holistic view on the patient's condition, including the information about their alternative medicine usage. Through observation and interview skills the practitioner gains knowledge about alternative medicine used and the patient's beliefs. The practice of narrative medicine develops the listening and interpreting skills necessary to include this information in diagnosis, while practicing humanistic medicine maintains the patient's individual experience with alternative and western medicine.

In the past, western culture has incorporated acupuncture, chiropractors, Ayurvedic medicine and others into practice which have become integrated and commonly used with western medicine (Coulter and Willis 2004). Integrations like these can make western medicine more holistic and can lead to more comprehensive health care. An example of a successful integration of holistic medicine with western medical science comes from the Navajo community (Coulehan 2003). According to Navajo customs, illness results from disharmony with the self, family, clan or the Navajo Way (Coulehan 2003). Traditional healing ceremonies incorporate a great deal of family interaction and a complex symbolism (Coulehan 2003). While working with Navajo communities, Coulehan (2003) observed successful incorporations of modern western medicine into their extant systems. For example, antibiotics were believed to alleviate the symptoms of pneumonia, but not to solve the disharmony that made the person fall ill in the first place. In these ways, the Navajo assimilated western procedures but kept symbolic meaning beyond the instrumental effects of the medicine (Coulehan 2003). The coalescence presented here serves as an example of an integration of alternative practices that also recognizes cultural and social factors and beliefs.

An open mind to forms of care that are not biomedical only will avoid potential conflicts and allow more incorporation of alternative practice aspects into U.S. practice. These

incorporations should be studied and assisted by anthropologists who understand cultural and social factors and measurements of alternative medicine effects that are not purely biological. An alternatively trained practitioner's knowledge system relates more closely to types of anthropology like ethnography than science-based medicine because it relates more to the phenomenal world of a person's everyday lived and embodied experience (Barry 2005). Evidence supporting the effectiveness of a treatment does not only consist of biomedical and scientific criteria for alternative practitioners, but includes whether the treatment affects the body, beliefs, social and cultural experiences of the client (Barry 2005). For example, an ethnographic study of a Chi Gung exercise class found that clients saw western medicine as alienating and too focused on reductionism (Busby 1999). The clients found that Chi Gung aligned more with their everyday interactions, life experiences and the nature of their body, instead of biomedicine's mechanistic view (Busby 1999). Similar to this study, ethnographic evidence can help to quantify alternative medicine's benefits, including the root of illness, view of self, relationship with therapist or transformational experiences (Barry 2005).

### **Heart Disease as an example**

Heart disease remains the leading cause of death in the United States. About 630,000 Americans die each year from heart disease, which translates to 1 out of every 4 deaths in the United States annually (Centers for Disease Control and Prevention, National Center for Health Statistics 2016). Between the cost of healthcare services, medications and lost productivity, heart disease costs the United States about \$200 billion each year (Centers for Disease Control and Prevention, National Center for Health Statistics 2016). The evolution of scientific medicine has enormously benefited the treatment of heart disease, markedly adding to physiological understanding with electrocardiology and visualization with isotope scanning (Weatherall et al.



2006). Current research has developed medicines for the management of heart disease like beta-blockers, diuretics, antihypertensive agents or calcium-channel blockers (Weatherall et al. 2006).

Although advancements in modern science have aided the understanding of and treatment for heart disease, this chronic disease remains the leading cause of mortality in the United States. Additionally, cardiovascular disease and its risk factors follow health disparities along education level, socioeconomic status and race/ethnicity in the United States (Mensah et al. 2005).

Anthropology can help individual practitioners recognize and address these disparities in cardiovascular disease. Heart disease exemplifies how the consumption of high-end diagnostic tools and prescriptions, along with financial investment do not directly translate to a positive health output in the United States currently. Instead, combining these medical advancements with the anthropological devices presented above can help the delivery of care towards heart disease patients in the United States.

### **Background information about heart disease and risk factors**

Heart disease (or cardiovascular disease) includes a variety of conditions affecting the heart, such as blood vessel disease, heart rhythm problems or congenital heart defects (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). These conditions can include narrowed or blocked blood vessels which have the potential to lead to chest pain, a heart attack, or stroke (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). Professionals encourage people to seek medical attention if they have chest pain, shortness of breath or fainting (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). Additionally, professionals suggest people talk to a doctor if they have any concerns or a family history of heart disease, because doctors are able to more effectively treat heart disease when detected early (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.).

According to the Centers for Disease Control and Prevention (CDC), high blood pressure, high low-density lipoprotein (LDL) cholesterol, and smoking persist as the leading heart disease risk factors, and about half of all Americans have at least one of these three risk factors. (Centers for Disease Control and Prevention, Million Hearts: strategies to reduce the prevalence of leading cardiovascular disease risk factors, n.d.). The CDC also notes that other medical conditions and lifestyle choices can put people at a higher risk for heart disease, namely: diabetes, obesity, poor diet, physical inactivity and excessive alcohol use (Centers for Disease Control and Prevention, Heart Disease Fact Sheet, n.d.). The Mayo Clinic adds age, sex (if male), family history, excessive use of caffeine, drug abuse, some over the counter medicine and herbal remedies, stress and poor hygiene to this list (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). The U.S. Department of Health & Human Services National Institutes of Health (NIH) includes these factors but also adds anemia, sleep apnea, and birth control pills paired with smoking and metabolic syndrome (United States Department of Health & Human Services, n.d.). As opposed to these United States sources, the World Health Organization Regional Office for Europe (WHO-Europe) adds socioeconomic group, mental health and globalization and urbanization as risk factors (World Health Organization Regional Office for Europe, n.d.). Refer to Table 1 below for a synopsis of risk factors presented on the websites.

*Table 1: Risk factors listed on website organizations*

<b>Organization</b>	<b>Risk Factors Listed</b>
American Heart Association	Major risk factors that can't be changed: increasing age, male sex (gender), heredity (including race) Major risk factors you can modify, treat or control: tobacco smoke, cholesterol levels (total, less LDL, more HDL, less triglycerides), high blood pressure, physical

	inactivity, obesity and overweight, diabetes mellitus Other factors that contribute to heart disease risk: stress, alcohol, diet and nutrition
CDC	High blood pressure, high low-density LDL cholesterol, smoking, other medical conditions such as diabetes, obesity poor diet, physical inactivity, excessive alcohol use
Mayo Clinic	Age, sex (male), family history, smoking, certain chemotherapy drugs and radiation therapy for cancer, poor diet, high blood pressure, high blood cholesterol levels, diabetes, obesity, physical inactivity, stress and poor hygiene, some over the counter medicine and herbal remedies
United States Department of Health & Human Services (NIH)	Smoking, high blood cholesterol and high triglyceride levels, high blood pressure, diabetes and prediabetes, overweight and obesity, birth control pills paired with smoking and metabolic syndrome, lack of physical activity, unhealthy diet, stress or depression, anemia, sleep apnea, age and menopause, family history
WebMD	Risk factors not listed
WHO-Europe	Genetic make-up, mental health, diet, overweight and obesity, tobacco, alcohol, diabetes, socioeconomic group, mental health, globalization and urbanization

Many of these websites, like the Mayo Clinic and especially the CDC, list a limited amount of risk factors. However, the WHO-Europe website recognizes additional risk factors that could have a large impact on who develops heart disease and lists factors that affect the effectiveness of treatment. Acknowledging these risk factors and incorporating them into treatment for heart disease is how ethnographic skills that consider a broader amount of information can improve medical practice for heart disease. Cultivating narrative and humanistic skills will help the practitioner to recognize these risk factors when diagnosing and treating a patient.

## United States heart disease treatment

The CDC funds a national program called State Public Health Actions that provides funding to the 50 states and DC to help prevent heart disease, obesity, and associated risk factors.

In accordance with the funding, the CDC website states that each state must take these actions:

- Promote the adoption of food service guidelines and nutrition standards, which include sodium levels.
- Promote the adoption of physical education and physical activity in schools.
- Promote the adoption of physical activity in early child care centers, schools, and work sites.
- Promote reporting of blood pressure and A1C measures; and as able, initiate activities that promote clinical innovations, team-based care, and self-monitoring of blood pressure.
- Promote awareness of high blood pressure among patients.
- Promote awareness of prediabetes among people at high risk for type 2 diabetes.
- Promote participation in American Diabetes Association-recognized, American Association of Diabetes Educators-accredited, state-accredited/certified, and Stanford licensed Diabetes Self-Management Education programs. (CDC's State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health, n.d.)

Additionally, the CDC website states that 32 states receive resources to take further actions related to cardiovascular disease:

- Increase access to healthy foods and beverages and supportive nutrition environments.
- Increase implementation of quality improvement processes in health systems and use of team-based care in health systems.
- Increase use of health-care extenders in support of self-management of high blood pressure. (CDC's State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health, n.d.)

Treatment for coronary heart disease (the most common heart disease) may include medicines, lifestyle changes (pertaining to smoking, diet, exercise, weight and stress), medical and surgical procedures, and cardiac rehabilitation (United States Department of Health & Human Services, n.d.). WebMD lists cardiopulmonary resuscitation (CPR), stents, angioplasty and stents, heart bypass surgery, valve disease treatment, cardioversion, enhanced external counterpulsation (EECP), pacemakers, implantable cardioverter defibrillators (ICD), lead extraction, left

ventricular assist device (LVAD) and heart transplant as possible treatments for heart disease (WebMD, n.d.). In addition, WebMD names 12 medicines to help with heart disease. The only other information on the website includes article links to “Plant-Based Diet for Heart Health,” “Recovery After Heart Surgery,” and “Finding Strength During Tough Times (WebMD, n.d.).” The Mayo Clinic lists lifestyle changes, medication and medical procedures or surgery as treatments for heart disease (Mayo Clinic, Patient Care & Health Information: Heart Disease, n.d.). The motto on the American Heart Association website reads “Eat Smart. Add Color. Move More. Be Well.” On their website, tabs are included to help with healthy eating, physical activity, healthy children, weight management, stress management, quitting smoking and workplace health solutions (American Heart Association, n.d.). Refer to Table 2 below for a synopsis of information presented on the websites.

*Table 2: Listed website treatments for heart disease by organization*

<b>Organization</b>	<b>Lifestyle Treatments</b>	<b>Other Treatments</b>
American Heart Association	Tabs on website include: healthy eating, physical activity, healthy child, weight management, stress management, quitting smoking, and workplace solutions	Medication
CDC	Treatments not listed	Treatments not listed
Mayo Clinic	Lifestyle changes	Medication and medical procedures or surgery
United States Department of Health & Human Services (NIH)	Smoking, diet, exercise, weight, stress	Medication
WebMD	Links to articles on “Plant-Based Diet for Heart Health,” “Recovery After Heart Surgery,” and “Finding Strength During Tough Times.”	CPR, stents, angioplasty and stents, heart bypass surgery valve disease treatment, cardioversion, EECp, pacemakers, ICD, lead extraction, LVAD, heart transplant, 12 medicines listed

WHO-Europe	Reductions in mean cholesterol concentration, smoking prevalence and blood pressure levels, focusing on a combination of risk factors at once	For people at high risk, combination drug therapy
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### **The importance of lifestyle in heart disease**

Despite a variety of available treatments, heart disease remains fundamentally a lifestyle disease. Many of the risk factors such as smoking, physical activity, diet, alcohol use, caffeine use, drug use, poor hygiene, some herbal remedies usage or stress levels could be mitigated with lifestyle changes. For example, an eight-year study of German individuals found that four behaviors (smoking, diet, physical activity and maintenance of a BMI <30) accounted for a 78% variance of risk for a serious chronic disease (Ford et al. 2009). In addition, the adoption of at least one of these healthy behaviors decreased the chronic disease risk by half (Ford et al. 2009). Because these lifestyle changes are important, adjusting and addressing many of these factors takes a skilled practitioner who can communicate effectively with the patient and work with them to adjust to a healthy lifestyle.

Although the Mayo Clinic, NIH and CDC mention many risk factors related to unhealthy lifestyle, the number of lifestyle treatments listed is disproportionate to the number of treatments listed that involve medical intervention such as surgery or medicine. For example, the NIH mentions lifestyle changes but spends a greater amount of time describing other types of treatments such as medicines or surgeries. WebMD, a resource that many use for medical information in the United States, does not mention any treatments that relate to lifestyle, although twelve treatments are listed. While medical treatments sometimes require more explanation than lifestyle changes, emphasis on lifestyle changes in treatment remains critical.

Some may argue that lifestyle changes come from the patient, yet many patients do not understand the importance of a healthy lifestyle and its long-term benefits in disease prevention. Most observers agree on the importance of improved education concerning healthy behavior and chronic disease management, but individuals also need to know how the importance of crucial participation and engagement to their health (Adams 2010). A study finding that financial incentives (being entered into a lottery for money) encouraged correct medication taking compliance concluded that short-term positive reinforcement could help patients internalize long-term benefits (Volpp et al. 2008). Practitioners can serve to explain long-term benefits and encourage short-term incentives through communicating with and educating their patients. In addition, Langer and Irving Janis (1979) found letting nursing home residents make decisions and control aspects of their daily activities lead to happier individuals. The group that was able to make choices also had a lower mortality rate than the control group (Langer and Irving Janis 1979). Educating patients about positive lifestyle choices and medications will allow them to better control and engage in aspects of their treatment process. In order to educate a patient on the long-term effects of lifestyle changes, clear communication from the practitioner tailored to each individual patient's life is necessary.

This communication between the practitioner and patient should be aimed at educating the patient on their condition. While patients are not always compliant, ensuring that patients are educated on their condition and treatment will at least give the patient the tools to be compliant. Without this education, patients do not understand how to be compliant in the first place. Additionally, just this communication and relationship with the doctor may increase the patient's motivation to carry out lifestyle changes or other forms of treatment. During a study of patients with congenital heart diseases in Belgium, more than 80% showed high understanding of their

disease by correctly answering questions relating to their disease treatment, frequency of follow up, dental practices, occupational choices and appropriateness of oral contraceptives (Moons et al. 2001). Between 50-80% knew the name and anatomy of the heart defect, the possibility of recurrent episodes of endocarditis (infection of the heart's inner lining) and the appropriateness of different physical activities. Less than 50% of participants answered correctly when asked the reasons for follow up, symptoms of deterioration of the heart disease, characteristics and risk factors of endocarditis, and the impact of smoking and alcohol on their condition. Overall, the study concluded that the adults have "important gaps in their knowledge about their condition [congenital heart disease]" and suggested educational interventions to better patient's health behavior (Moons et al. 2001: 74). The results from this study in Belgium are just as relevant for practitioners in the United States to consider when administering care for heart disease patients.

Overall, heart disease management must include education, especially because lifestyle constitutes such a big factor in heart disease. In educating the patient about their medical condition one should consider their health literacy and patient's ability to change lifestyle (Adams 2010). Practitioners experience difficulty in determining the health literacy of each patient and overestimate their literacy (Kelly and Haidet 2007; Weiss 2007). However, conducting assessments on a sample of patients could present as helpful to know the general health literacy of the population a practitioner treats (Weiss 2007). Practitioner's tailoring communication to the individual patient is beneficial whether communicating on the telephone, in-person or via text (Kane 2009). An anthropological lens can help the practitioner better educate patients by understanding the patient before them.



### **The benefit of anthropology in health care applied to heart disease**

The value of ethnography as a way of accurately assessing a cardiac patient's condition presents remarkable potential for heart disease treatment. Conventional statistical measures cannot always measure vital lifestyle changes and improvements for heart health. For example, it is difficult to measure smoking cessation, changing diet, lowering stress levels, increasing exercise, or limiting alcohol, drugs and caffeine physiologically in the short term. However, ethnography can measure the differences patients make in their lives and habits. Additionally, whether the patient feels better and healthier during the day holds meaningful information but the practitioner cannot measure this information without talking to the patient.

To communicate and explain their diagnosis and treatment to the patient narrative and humanistic medical skills are employed. Not only can these tactics garner information from the patient about health improvements not measurable physiologically, they can help build a patient-physician relationship. A better relationship will help bridge educational gaps in the patient's knowledge and better equip the practitioner to understand the lifestyle contributions to the patient's heart disease. Understanding a patient's lifestyle is imperative to determining heart disease treatment. While time or insurance constrains practice, Charon (2008) argues that listening to the patient and developing narrative skills can be carried out within this fast-paced environment. With practice, medical practitioners can train themselves to recognize important aspects of a patient's illness not displayed in biological measurements. These skills will facilitate the patient-physician relationship, which will give the physician access to a variety of factors affecting the patient's condition. With this relationship, the patient will learn more about their condition through better patient-physician communication.

A strong relationship and communication can also aid in determining any social or ethical constraints and factors which could affect the patient's heart disease treatment. For example, it is difficult for a patient to take heart disease medication if they do not live in a stable home, possess transportation or hold adverse ideas about medication. If a patient has a dysfunctional routine or home life, following a stable drug regimen may be difficult. Moreover, if they have had family members who have had adverse reactions or addiction problems to medications, they may be hesitant to take their heart disease medication. Farmer's (2013, 2003, 1999) statements about structural violence and social determinants of health can help guide the practitioner ask the right questions and help the practitioner judge someone's degree of agency in improving their condition. While many sources above listed lifestyle factors, only the World Organization of Health Office for Europe listed larger forces that can contribute to or be products of structural violence such as socioeconomic status, mental health or urbanization. Because heart disease has many lifestyle factors, practitioners must think about the patient's ability and resources to correct lifestyle habits.

Living in a food desert serves as an example of how patients may not contain the ability or as many resources to correct their lifestyle, in this case diet. A practitioner may prescribe a healthier diet, but with many people living in food deserts in the United States this may be difficult (Gallagher 2010; United States Department of Agriculture: Food Desert Locator, n.d.). A food desert incorporates income level, distance to supermarkets and vehicle access, broadly defined as when more than 500 people or 33% in an area live half a mile from the grocery store in an urban area or ten miles in a rural area, which encompasses 17.7% of the United States population (United States Department of Agriculture: Definitions, n.d.). If a patient lives in a food desert, they do not have access to a grocery store. Within food deserts patients only have

access to prohibitively expensive restaurants or unhealthy fast food (Gallagher 2010; United States Department of Agriculture: Definitions, n.d.; Walker et al 2010). A study with 14 study sites out of 27 in the United States found that healthy food costs an average of \$1.50 more than unhealthy food (Rao et al. 2013). The fact that unhealthy food is much more affordable than healthy food needs acknowledgement when advising diet changes. There are cheap foods that are healthy and good for heart disease (low in cholesterol, sodium, and fat) like rice, beans, oats or potatoes (Magee 2012).

Practitioner's need to explain the importance of these diet changes because of the challenges navigating healthy options poses, especially when the patient has social or financial constraints. A study of 25 working mothers and 25 working fathers found that the parents resorted to unhealthy eating options like take-out meals or missing meals because of their work constraints (Devine et al. 2009). These constraints can take many forms, such as a parent being too busy to exercise in a conventional way. The parent could benefit from ways of burning calories and building muscle mass, and therefore developing cardiovascular health, without going to the gym. Likewise, if a businessperson has a great deal of stress with their job, they may need suggestions to manage the stress, because removing the causes of stress is not possible. Additionally, if someone is unable to afford to eat properly they may not have enough energy to exercise (Feldman 2010; Traywick and Schoenberg 2008). Heart health depends on diet, exercise and stress, among other lifestyle factors, and quality communication between practitioner and patient through narrative can help tailor these known facts to an individual's life.

Communication and a patient-physician relationship can help practitioners to consider these factors and avoid diagnostic mistakes. For example, it is possible that men and women exhibit different presentations of cardiovascular diseases, which affects treatments and risk

prediction when treating cardiovascular disease depending on gender (George et al. 2015; McKinlay 1996). Penque et al. (1998) found both women and men exhibited the common signs and symptoms associated with heart disease: chest pain, fatigue, rest pain, shortness of breath and weakness. However, women with heart disease also reported loss of appetite, paroxysmal nocturnal dyspnea, and back pain as initial signs and symptoms (Penque et al. 1998). At the same time, men were more likely to receive an angiography (a type of medical imaging technique) and a number of therapies when they first experienced the initial symptoms of heart disease (Penque et al. 1998). In these cases, practitioners more readily diagnose heart disease in men, and may be missing certain symptoms that women are more likely to display than men. Therefore, a “one size fits all” approach is not effective for determining cardiovascular disease risk, diagnoses, or treatments (George et al. 2015). If practitioners are able to approach symptoms on an individual level these diagnostic discrepancies could be minimized, and symptoms that women may exhibit that men do not could be identified. Ethnographic practices align with approaches that combat the “one size fits all” approach, emphasizing communication and the individual in medical practice.

At the same time, this communication helps to address any confusion or opinions the patient might have based on past experiences. In addition, the patient may have questions about alternative medicine usage. Some patients are unlikely to follow certain treatments or lifestyle changes because they have beliefs about a form of treatment. Understanding these beliefs and alternative practices can aid in integrating them with biomedicine, as with the Navajo case mentioned above (Coulehan 2003). Additionally, integration and communication are fundamental in order to address possible interactions between treatments, because certain herbal remedies are considered risk factors for heart disease (Mayo Clinic, Patient Care & Health

Information: Heart Disease, n.d.). If patients hold certain beliefs about medicines or surgery, or if lifestyle habits such as smoking or chronic stress are part of a patient's culture, communication can allow the practitioner to adjust treatment expectations to the individual.

Following these methods, practitioners can incorporate an evolutionary framework from anthropology in treating heart disease. Evolutionary mismatches presented above help to explain why lifestyle contributes to heart disease. Evolutionary theory explains why lifestyle factors like diet or exercise can have a huge effect on heart disease. These evolutionary connections can help the practitioner interpret the patient's heart condition and can be used as a tool to help the patient understand their condition. For example, humans may have evolutionary adaptations to compensate for unreliable sodium access or for fat storage to obtain food when food sources were not consistent in a hunter-gatherer lifestyle. Considering this adaptation can help us understand why our bodies are adapted for some conditions. Typically, the average American lifestyle does not require such adaptations. Adaptations for frequent exercise and unpredictable sodium and freshwater now contribute to heart disease (Trevathan, Smith, and McKenna 2008). An affinity for sodium and a metabolism adapted for exercise can explain why lifestyle factors are relevant in heart disease. Cardiovascular diseases result from differences or mismatches in our evolved environment with diet, alcohol and nicotine exposure and lifestyle (Lieberman 2013). Insights like these can help the practitioner and patient understand the diagnosis and treatment of cardiac disease.

Anthropology gives us a context to interpret the importance of lifestyle changes for treating heart disease and how to communicate this to patients in order to accomplish these changes in lifestyle. Because of the wide range of treatments for heart disease, specific treatment that the patient will most likely participate need to be prescribed, in given their life constraints

and beliefs. Because lifestyle changes and factors are constructive to heart health but not mentioned on the websites cited above as frequently as drug and surgical therapy, practitioners need to incorporate these in patient treatments. Although critical for the complete care of cardiac patients, lifestyle changes and factors are much more difficult to address than therapies like drugs or surgery. Recognizing and improving lifestyle factors in heart disease presents an example of how anthropology can help by providing a different lens with which to understand the patient with heart disease or other chronic maladies.

### **Conclusion**

The field of anthropology can add to clinical practice for chronic illness in the United States by using a holistic blend of approaches to aid in diagnosing and treating patients. Anthropology studies humans, striving to understand them in many different capacities. Medical professionals aim to use their knowledge to treat or improve chronic illness but need to remember the human aspect of medicine when working closely with people. In this situation, practitioners should keep in mind anthropological tools and theories while striving to deliver the best care possible.

The United States healthcare system and individual medical practitioners face many challenges with time and cost in the realms of insurance bureaucracy. Because it is difficult to separate or know the spectrum or extent to which practitioners already employ these skills, it is difficult to definitively state that incorporating anthropology into practice improves health outcomes. The lack of extra time that practitioners have to explore, learn or incorporate theories mentioned above such as narrative medicine or evolutionary theory limits the application of the recommendations in this paper. In addition, they feel that what they see as scientific treatments should take precedence. Additionally, medical schools may think that the vast amount of

information students must learn spans too much material to allow incorporation of these theories and approaches (Dent, Harden, and Hunt 2017). Moreover, theories can sometimes be difficult to apply in practice in the fast-paced environment and these increased efforts could elevate burn out in a professional where burn out is already high (Feldman 2010).

However, individual practitioners and clinics can use these theories by thinking about them and incorporating them. Asking more questions to understand someone's background, contemplating the possibility that patients will have difficulty following treatments, or asking if other alternative medicines are used, are small steps towards better care. Attempting to truly listen to patients and realize unique illness experience is not the same as another person suffering this illness can help to improve the effectiveness of the healthcare system in the United States.

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