Heart disease accounts for 38% of all deaths in the United States. The American Heart Association identified cardiovascular disease (CVD) as the most common cause of hospitalization in 2002. Direct and indirect costs of CVD have reached a total of \$393.5 billion in 2005.¹ Despite great advances in the treatment of CVD, high mortality rates and poor clinical outcomes persist. It has been estimated that a 17-year gap exists for research to reach clinical practice.²

More than half a million Americans of Arab ancestry live in Michigan. Similar to other ethnic groups, Arab Americans face challenges within the US healthcare system that hinder optimal clinical outcomes. Evidence-based studies targeting the Arab American population do not exist. Small observational studies provide limited data of questionable value. (*Ethn Dis.* 2007;17[Suppl 3]:S3-28–S3-30)

Key Words: Barriers, Health Outcomes, Cardiovascular Disease

BARRIERS TO OPTIMAL OUTCOMES

Optimal outcomes for patients with cardiovascular disease present a challenge to healthcare providers. Arab American patients and other ethnic minorities face significant barriers due to their relative isolation in our society and lack of scientifically reliable studies and evidence-based strategies to overcome these barriers. The barriers in clinical practice have been classified into issues related to the patient, the physician, and the healthcare system.

Patient barriers

Risk factors

The major cardiovascular disease risk factors dominating the health of the Arab American patient include the high prevalence of diabetes and tobacco use. Many clinicians equate diabetes mellitus with coronary artery disease. A recent study sponsored by the American Diabetes Association documented a 15.5% prevalence rate of diabetes among the Arab American population, compared to 5%–8% found in the general population.⁴ Genetic, environmental or dietary causes remain to be explored.

Michigan has the 14th highest smoking rate in the nation, and tobacco use among Arab Americans is higher than the general population of Michigan.⁵ Factors contributing to this high prevalence include perceptions such as: tobacco use confers maturity status to the smoker; offering tobacco is an expected hospitality gesture; and the water pipe is considered a non-tobacco product.

Communication Issues

Arab Americans, especially those who are first-generation Arab Ameri-

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cans, have a tendency to use an indirect communication approach, similar to that found in their country of origin. Arab American patients answer a direct question by telling an introduction and a story, often without ever addressing the initial question. It is usually left to the listener to formulate a conclusion. This communication approach leaves physicians unclear about patients' main ailment and treatment expectations. The lack of clear communication hinders optimal care.

Socioeconomic Issues

Two diametrically opposed populations of Arab Americans exist - the highly educated, financially strong group and the poorly educated, often illiterate, financially limited and isolated group. The educationally disadvantaged group lacks the knowledge about the symptomatology and complications of CVD. Financial burdens limit the group's access to health care. Their first contact with health care is usually the hospital emergency room in the late stages of disease. Additionally, the ability to followup or to fill prescriptions remains limited. In addition, this group is ineligible for any type of medical assistance until they obtain citizenship.

Compliance Issues

Several studies have shown that, as the number and frequency of medication regimen increase, compliance rate decreases. Physicians caring for CVD employ a multitude of evidence-based effective medications. Aside from the financial barriers to compliance, many Arab Americans believe the more medications they take, the poorer the outcomes they will experience. They regard multiple medications as poisonous to their body. They also believe that many

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cardiac drugs interfere with their sexual function.

Although Arab Americans have had a low interest in exercise and diet (possibly linked to lack of role models in their country of origin), this seems to be slowly changing. The traditional diets are healthy with plenty of grains, fruits and vegetables in the countries of origin; however, the abundance of meat and sweets nullify any healthy advantage of these diets.

Another observed phenomenon is doctor shopping. Many physicians rely on follow-up feedback of proposed treatment in order to modify treatment plans. Doctor shopping delays improved outcomes and it adds to the cynicism of both doctors and patients. Possible explanation to this issue is the patient's expectations of cure and the lack of differentiation between chronic and acute diseases. Poor communication and limited educational efforts between patients and physicians contribute to this phenomenon.

Physician Barriers

Communication, Time, Knowledge/Expertise, Attitude

Many physicians caring for Arab American patients do not speak Arabic. Those who speak the language struggle with the multitude of different dialects. Doctors and patients with differing dialects can exchange words but lack a complete and clear communication. In addition, Arabic-speaking physicians learned medicine and medical terminology in English. If not careful, the Arabic words for gallbladder or liver can easily be confused with words for pancreas or kidneys.

In general, the decreased rates of reimbursement and the increase in documentation requirements have forced many physicians to see more patients in less allotted time. As a result, educational time regarding disease treatments, complications or prevention has been compromised. Some physicians lack expertise in certain disease management either because of lack of training, certification, or failure to keep up-to-date with the latest research advances. Furthermore, published medical practices lack standardization. Multiple publications of the same subject with many conflicting recommendations add to the confusion of physicians regarding the best approaches for treatment.

In general, physicians harbor poor enthusiasm toward prevention because of lack of emphasis in medical schools and residency training. Furthermore, insurance reimbursement favors procedures at the expense of prevention. Physician reimbursement for patient education and counseling is virtually non-existent, compared to performing simple medical procedures. Even the HMO claim to advocate prevention fails to correct this tendency because reimbursement is too meager to cover overhead expenses, let alone teaching or counseling.

Healthcare System Issues

Medical Coverage

The United States is experiencing an explosion in the number of uninsured and the under-insured patients. Arab American patients with financial difficulties tend to belong to this group. Those awaiting citizenship are not eligible for any medical assistance. Under-insured patients tend to have lowpaying jobs, thus limiting the diagnostic and therapeutic options. It also limits the patients' access to certain hospitals, physicians and sub-specialists. For many HMOs, the lowest medical cost continues to be the leading incentive for healthcare delivery. Many HMOs limit choices to medications of least effectiveness, highest profile of side effects, and most drug-drug interactions simply because of lowest cost. In addition, as our healthcare system moves toward more and more discounted care, doctors are responding by making more appointments per hour, resulting in poor ratings to the healthcare system and providers.

Medical Records, Education Efforts, and Translations

Nationally, the disastrous and disorganized medical records system is a huge challenge. The great majority of physician offices and hospitals lack electronic medical records. There is no interface between hospital and clinic records. For optimal patient care, it is important to develop systems of evidence-based practices and to electronically prevent medical errors, drug interactions and reminders for better preventive management.

We lack well-coordinated educational efforts to teach the general population about CVD, diabetes mellitus or smoking cessation. The attempts by pharmaceutical companies at some of these topics are often inadequate and have often resulted only in prompting patients to ask for specific drugs, thus driving healthcare costs even higher.

We have a paucity of high-quality, up-to-date translated materials to help educate Arab American patients. The prospects are even worse for those unable to read or write. Audiovisual materials are nonexistent. Translated materials, both in print and audiovisual formats, are essential communication tools for better health outcomes.

CONCLUSION

Although Arab Americans are presented with unique barriers, they share many issues with the American public. Great strides must be undertaken to overcome such barriers. Suboptimal care is associated with higher morbidity and mortality and hence with decreased productivity and a higher financial burden on the society. Solutions must be comprehensive and effective. Although individuals may have some impact on improving the healthcare

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system, the financial burden of the change requires a legislative mandate and support.

Our healthcare system must assure basic medical coverage for all citizens. To achieve this, we recommend the following:

- Electronic medical records should be available to all practices, hospitals and pharmacies. These records initiate prompts for preventive and better-coordinated services, thus minimizing potential drug errors and saving lives.
- Our healthcare system must create a demand for patient and provider education on most effective practices.
- We must improve healthcare promotions through community campaigns using variety of learning methods and formats to include audiovisual and print materials in multiple languages.

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