

Islam, medicine, and Arab-Muslim refugee health in America after 9/11

Marcia C Inhorn, Gamal I Serour

Islam is the world's second largest religion, representing nearly a quarter of the global population. Here, we assess how Islam as a religious system shapes medical practice, and how Muslims view and experience medical care. Islam has generally encouraged the use of science and biomedicine for the alleviation of suffering, with Islamic authorities having a crucial supportive role. Muslim patients are encouraged to seek medical solutions to their health problems. For example, Muslim couples who are infertile throughout the world are permitted to use assisted reproductive technologies. We focus on the USA, assessing how Islamic attitudes toward medicine influence Muslims' engagement with the US health-care system. Nowadays, the Arab-Muslim population is one of the fastest growing ethnic-minority populations in the USA. However, since Sept 11, 2001, Arab-Muslim patients—and particularly the growing Iraqi refugee population—face huge challenges in seeking and receiving medical care, including care that is judged to be religiously appropriate. We assess some of the barriers to care—ie, poverty, language, and discrimination. Arab-Muslim patients' religious concerns also suggest the need for cultural competence and sensitivity on the part of health-care practitioners. Here, we emphasise how Islamic conventions might affect clinical care, and make recommendations to improve health-care access and services for Arab-Muslim refugees and immigrants, and Muslim patients in general.

Introduction

Islam is the world's second largest religion, with 1.57 billion followers (23% of the global population).¹ 50 countries have predominantly Muslim populations, including the 22 nations representing the Middle East.¹ However, 683 million Muslims live in Asia.¹ For example, Indonesia has 15.6% of the world's Muslims, with large populations also present in Malaysia, Pakistan, Bangladesh, and India.¹ 80–90% of Muslims worldwide belong to the Sunni branch of Islam.¹ The Shia branch, with its demographic epicentre in Iran, is estimated to represent 10–20% of the world's Muslim population.¹ However, Shia Muslims from Iraq are disproportionately represented among refugees from the Middle East who have been entering the USA after Sept 11, 2001 (9/11).²

Here, we focus on two goals. First, we assess how Islam as a religious system shapes medical practice, and how Muslims in general view and experience their medical care. The relation between Islam and medicine has been described as intimate.³ Islam has generally encouraged the use of science, medicine, and biotechnology as solutions to human suffering.⁴ Thus, Muslims throughout the world might be eager to make use of the latest medical developments, and, in many cases, might prefer western biomedicine to other forms of care.^{4–8} Furthermore, Islamic religious authorities could play an important part in encouraging technoscientific developments through their fatwas (non-legally binding but authoritative Islamic opinions, offered by Islamic clerics who are judged to be experts with respect to the Islamic scriptures and jurisprudence⁹), which often condone new medical advances, while placing limitations on some practices of medicine.^{4,6} The use of assisted reproductive technologies and the fatwas to regulate them provide a compelling example of clerical support in medicine.^{4,6}

Second, we look at the Muslim population in the USA, specifically Arab refugees, and assess how Islamic

attitudes toward medicine affect Muslims' engagement with the American health-care system. Since 9/11, Arab-Muslim patients—and particularly the growing Iraqi refugee population in the USA—encounter many challenges in seeking and receiving medical care, including care that is judged to be religiously appropriate.⁷ We assess some of the barriers to care—language, economics, and discrimination. We also investigate how Muslim patients' religious concerns suggest the need for religious sensitivity on the part of health-care practitioners. The table summarises the issues that might be useful for non-Muslim physicians who treat Muslim patients, including Arab-refugee populations.

The discussion presented here about Islam and medicine is largely based on research undertaken by us since 1980 in three Middle East countries (Egypt, Lebanon, United Arab Emirates) with predominantly Muslim populations. The

Search strategy and selection criteria

We included information from a range of scholarly sources, including ten volumes about Islamic bioethics and ethics, seven volumes about Muslim and Arab life in the USA, and a clinically oriented collection about caring for Arab patients. Additionally, we searched for, obtained, and reviewed reports published in journals and online using PubMed, Medline, and Google Advanced Scholar Search. Using the search terms "Islam and medicine", "Muslim health care", "Muslim cultural competency", and "Arab American health," we reviewed lists with hundreds of reports. From these lists, we have selected 24 articles published after Sept 11, 2001, that are of direct relevance to this Review. We restricted our search to papers published in English. Additionally, we have reviewed several online reports from governmental agencies, international organisations, and major news media about Muslim immigration and health.

Lancet 2011; 378: 935–43

Department of Anthropology and Council on Middle East Studies, Yale University, New Haven, CT, USA (Prof M C Inhorn PhD); and International Islamic Centre for Population Studies and Research, Al Azhar University, Egyptian In Vitro Fertilisation and Embryo Transfer Centre, Cairo, Egypt (Prof G I Serour MD)

Correspondence to: Prof Marcia C Inhorn, Department of Anthropology and Council on Middle East Studies, Yale University, 10 Sachem Street, New Haven, CT 06520-8277, USA marcia.inhorn@yale.edu

discussion about Arab–American Muslim-refugee health is based on two qualitative studies of Arab–Americans in Dearborn, MI, USA, undertaken by MCI during the period after 9/11 (2003–05, 2007–08).^{7,10} In this report, we have drawn extensively from our own research findings in terms of Islam, bioethics, and biotechnologies in the Muslim Middle East (including Iran),^{4,7,8,10–30} and Arab America.^{7,10} Although the focus of this report is on Arab–Muslim populations in the Middle East and North America, we intend for this report about Islam and medicine in the post-9/11 era to have broader relevance.

Islam and medicine

Prophetic medicine to technoscientific revolution

According to Islam, God is believed to have created human beings and given them their bodies as gifts to be cared for.³¹ Thus, keeping one’s own body in good health is important, and individuals who are ill are expected to seek solutions to

restore their physical and mental wellbeing.^{32,33} The Islamic scriptures, including the Quran and hadith (sayings and deeds of the Prophet Muhammad, gathered after his death), contain many verses pertaining to health and healing.^{5,8,31} Taken together, these early Islamic health prescriptions and injunctions were termed prophetic medicine.^{3,8,13,31} For example, the importance of maintaining a healthy lifestyle, which includes attending to personal hygiene, maintaining the cleanliness of food, abstaining from drinking alcohol, and resorting to prayer to promote healing are emphasised in the Islamic scriptures.^{32–34} Furthermore, a hadith attributed to the Prophet Muhammad states that for every disease there is a remedy. Similarly, the Prophet enjoined believers to seek knowledge “from the cradle to grave”.³ Thus, Muslims are encouraged to seek knowledge about their afflictions, and to pursue medical remedies administered by qualified healers.³¹ Although diseases and infirmities that cannot be cured are

Recommendations	
Health problems	
Lack of adequate research into the health of Arab immigrants and Muslim populations in the USA	Need for more studies about many aspects of Arab-immigrant and Muslim health in the USA
Stress associated with acculturation, immigration, and discrimination leads to adverse health outcomes	Need for comprehensive health services directed at new Arab immigrants
Self-rated health is fair or poor among Arab immigrants, especially monolingual Arabic speakers	Need for more qualitative and psychosocial research into health in the Arab-immigrant community
Iraqi refugees are more likely than are other Arab immigrants to be diagnosed with post-traumatic stress disorder and physical complaints	Need for mental health services to address trauma among Arab refugees who have experienced violent conflict
Poverty	
Many Arab immigrants and refugees have a low socioeconomic status, existing below the US poverty line	Need for English, educational, and employment training programmes for new Arab immigrants
Resettlement of Iraqi refugee community in metropolitan Detroit, MI, USA, where autobody economy is failing	Need for relocation of Iraqi refugees from Detroit to other American cities with existing employment opportunities
Iraqi refugee unemployment rates are three times higher than are the national average	Need for microenterprise projects to employ unemployed Iraqi men and women
Iraqi refugee reliance on US welfare and disability systems	Need for targeted financial assistance programmes in the Iraqi refugee community
Lack of health insurance	
Arab immigrants are often not insured after initial months of refugee assistance	Need for longer periods of refugee health-care insurance coverage
Medical care paid out-of-pocket by Arab immigrants in low-pay employment, so most health care is unaffordable	Need for Arab immigrants to join new national health-insurance system
Reliance on charity for catastrophic coverage	Need for new charity programmes focusing on Arab-immigrant populations
Inability to return to war-torn countries to access affordable medical care	Need for conflict resolution in the Middle East, so that immigrant populations can return to home countries, if desired
Language barriers	
Lack of English-language skills, especially among poorly educated immigrant women	Need for English-language training programmes designed for Arab immigrants, including women-only classes
Lack of Arabic medical interpreters in health-care settings	Need for more Arabic-speaking physicians and medical interpreters in US health-care settings
Lack of health education materials in Arabic	Need for more Arabic-language health education materials in institutions serving Arab-immigrant patients
Discrimination and distrust	
Sept 11, 2001, created new barriers to care for Arab and Muslim populations	Need for health-care institutions to reach out to Arab-immigrant populations in the community
Fears of poor treatment or threats of deportation when accessing public health-care facilities	Need for health-care providers to emphasise medical confidentiality and trust-building with Arab-immigrant patients
Arab–Muslim women harassed for wearing the hijab (head covering)	Need to treat female Muslim patients with respect, including their right to wear the hijab in medical settings and appointments
Disrespectful treatment of Muslim patients by non-Muslim health-care providers	Need for cultural competency training among American physicians who serve Arab-immigrant populations

(Continues on next page)

Recommendations

(Continued from previous page)

Desire for Muslim physicians

Many Arab-immigrant patients desire an Arab-Muslim physician with a shared cultural and religious background	Need for more Arab-American Muslims to become physicians, nurses, and ancillary health-care personnel
Issues of concern to Muslim patients include dietary and treatment restrictions; fasting during Ramadan; spiritual beliefs about God's role in health; belief in the evil eye as cause of misfortune; desire to undertake pilgrimage to Mecca, Saudi Arabia, before death; proper handling of the Muslim corpse	Need for US health-care institutions to require cultural competency training programmes for Muslim health and end-of-life care
Gender comportment in the clinical setting is important for pious Muslim patients; modesty in terms of touch and gaze includes avoiding handshaking with the opposite sex	Physicians should place hand over heart as a sign of greeting with pious Muslim patients of the opposite sex
Pious Muslim patients desire care from physicians of the same sex, especially in the specialties of gynaecology, obstetrics, and urology	Need for women physicians and nurses to treat female Muslim patients, especially in the settings of obstetrics and gynaecology
Clinical interactions between the sexes might be uncomfortable for pious Muslim patients, including avoiding being in a room alone with a physician, making direct eye contact, answering direct questions, being asked to undress for clinical examinations, being touched in clinical examinations, being asked to wear revealing hospital gowns, or being asked to remove a headscarf	Interactions in medicine between the sexes must be included in cultural competency training
Desire of Muslim patients to seek the opinion of a religious authority before and during medical treatment, including in written fatwas	Physicians need to respect Muslim patients' consultations with clerics, including fatwa-based permissions and restrictions on medical care
States with large Arab and Muslim populations (Michigan, California, New York, New Jersey, and Florida) need health-care outreach to Arab-Muslim communities	Need to develop health-care programmes in partnership with local Islamic organisations and clerics
Need for better health-care access among hard-to-reach and vulnerable Arab-Muslim immigrant and refugee communities	Creation of health-care clinics affiliated with Islamic institutions (eg, local mosques)
Desire of Muslim patients to seek psychosocial support from imams about issues of stress and discrimination after Sept 11, 2001	Need for more formal mental health training for Muslim clergy in the USA

Table: Issues, specific challenges, and recommendations for the health of Arab-Muslim immigrants

generally accepted as God's will,^{5,33} Muslims are encouraged to be agentive, or active seekers, when medical problems can be solved.⁴ Medical advancements are seen as being created by human scientists under God's providence. Physicians are seen as undertaking God's handiwork.⁴

Because Islam encourages technoscientific curiosity,³⁵ some of the wealthier regions of the Muslim world are undergoing a veritable technoscientific revolution in high-tech medicine.^{12,14} An example is Iran, home to a third of the world's Shia Muslim population.¹ Iran has a therapeutic stem cell industry,³⁶ high rates of commercial organ donation and transplantation,³⁷ and one of the most active sexual reassignment surgery specialties in the world.³⁸ It also has a thriving industry for assisted reproductive technology, with more than 70 in-vitro fertilisation clinics to help Muslim couples from home and abroad who are infertile.³⁹

Iran's assisted reproductive technology revolution provides an excellent example of the relation between Islam and medicine.¹⁴ On the one hand, infertility is explicitly mentioned in the Quran as a God-given reproductive impairment. Thus, Muslims with intractable forms of infertility are expected to accept their childlessness with grace.^{8,11} On the other hand, the invention of assisted reproductive technologies to overcome infertility is considered God's gift to infertile couples. God is seen as having created assisted reproductive technologies to overcome this reproductive affliction.⁴ As a result, assisted reproductive technologies are now found throughout the Muslim world from Morocco to Malaysia.¹⁹ With the exception of some resource-poor Muslim countries in

sub-Saharan Africa, nearly all other countries with predominantly Muslim populations—eg, Mali, Kazakhstan, and Bangladesh—have clinics providing assisted reproductive technologies.¹⁹ Some Muslim countries have many such clinics—eg, more than 110 in Turkey,⁴⁰ more than 50 in Egypt,¹⁹ and nearly 20 in Lebanon (with a population of 4 million, Lebanon has the highest number of such clinics per person in the world).^{6,12} The beginning of a thriving assisted reproductive technology industry for Muslims is also tied to Islam's inherent pronatalism. The Islamic scriptures encourage a multitude of Muslims.¹¹ Hence, the use of biotechnologies to assist in the conception of human life has an implicit appeal in the Muslim world.

Clerics, fatwas, and Islamic bioethics

Muslims do not agree on some common global norms or best practices. Their responses to medical problems and procedures, such as assisted reproductive technologies, are mediated by a wide range of ever-changing local circumstances and social forces.⁴ There is a great diversity in the world's Muslim population. In addition to sectarian differences between Sunni and Shia Muslims, the followers of Islam vary greatly in their religious piety.^{41,42} Some Muslims follow particular clerics, whereas others consider their primary relationship to be with God. Some Muslims know that they are breaking the rules, but hope for God's mercy and forgiveness. Others simply do not care, having left the religion or associated themselves with secular humanism, communism, atheism, or science. Muslims do not follow a single path; this difference is as true for the Muslim clerics who form

their medical opinions as it is for the Muslim patients who must make decisions about their medical care.¹²

Although some Muslim clerics have argued against the use of medical technologies, such as abortion, vasectomy, and organ donation,^{43–47} others have lent support to medical interventions with much enthusiasm, frequently justifying their decisions on the basis of prevention of human suffering and ensuring family welfare.¹⁶ The role of Islamic authorities in shaping Islamic bioethical opinions has been very important.^{20–22,24–30,43–46,48–52}

Such official opinions generally come in the form of fatwas, which can be privately issued by a Muslim cleric—eg, in response to an individual's specific medical question. Fatwas can also be issued as public statements (eg, in the media) by individual clerics, or by fatwa-issuing councils of clerics within religious universities and special institutions set up specifically for this purpose.²⁰ In Egypt, for example, clerics at the ancient and renowned religious institution Al Azhar University, Cairo, have issued scores of decisive opinions about medically related issues, including blood donation, kidney dialysis, organ transplantation, family planning, and assisted reproductive technologies.^{24–30,47} Authoritative fatwa-granting institutions are also present in other Muslim countries, such as Saudi Arabia, Kuwait, and Malaysia.²⁵

Nowadays, Muslim patients can access fatwas about medical topics in many ways, including media channels, printed collections written by clerics, and websites maintained by offices of some clerics.^{6,20} Additionally, individuals can place direct queries to these offices, either in person or through telephone, fax, email, or internet. In some cases, patients can meet directly with a cleric to make a personal inquiry and receive an expert opinion.²⁰

Fatwas about various medical topics have received additional support from Islamic bioethical organisations. In the Middle East, these are the Islamic Organisation for Medical Sciences (IOMS) in Kuwait, Islamic Educational, Scientific and Cultural Organisation (ISESCO) in Rabat, Morocco, and International Islamic Centre for Population Studies and Research at Al Azhar University in Cairo, Egypt. IOMS regularly holds conferences to discuss and debate issues about bioethical importance.²⁷ ISESCO also holds meetings and issues regular newsletters and reports about various contemporary bioethical issues, such as embryonic research.²⁹ Organisations such as IOMS, ISESCO, Al Azhar University, and the Islamic Fiqh Council in Mecca, Saudi Arabia, have issued several important bioethical declarations for Muslims.

Generally, Islamic authorities have accepted many new forms of medical technologies, including those that are life-supporting (eg, dialysis) and life-saving (eg, liver transplantation).^{47,53,54} However, Islamic authorities have also served as de-facto regulatory agents for the medical system, often in the absence of effective state medical regulations.²³ Although many forms of medicine have been condoned as halal (religiously permitted) by Islamic authorities, some medical practices have also been deemed

haram (religiously forbidden). For example, human reproductive cloning—involving the creation of a genetically identical copy of a human being—has been strictly banned by the IOMS and Al Azhar University.^{55,56} Nonetheless, Muhammad Husayn Fadlallah, the deceased Lebanese Shia cleric, deemed human reproductive cloning halal for his followers.²⁰

Such clerical diversity shows that Islam is not a monolithic religion in terms of medicine. Assisted reproductive technologies are again an example. Since the 1980s, in-vitro fertilisation has been widely accepted in the Muslim countries, on the basis of a comprehensive fatwa that was issued in March, 1980, by Shaykh Gad El Hak, who was Egypt's leading Islamic cleric at the time.⁵⁷ In most Muslim countries, in-vitro fertilisation is also accompanied by embryo cryopreservation, which is permitted for future cycles of in-vitro fertilisation.²⁸ However, in Sunni Islam, religious authorities refuse any form of third-party reproductive assistance, including sperm, oocyte, and embryo donations, and surrogacy.^{4,6,12,16,21–30} Sunni religious authorities deem third-party donation tantamount to adultery; they are also concerned about incest among the offspring of anonymous donors, and fear the effects of genealogical confusion on donor children and their families.^{4,6,12} For these and other reasons, third-party reproductive assistance is banned in Sunni-dominant countries—a ban that has been in effect for 25 years since the technologies were first introduced in Egypt, Saudi Arabia, and Jordan.⁵⁸

However, Islam is not monolithic and Islamic religious authorities are not in agreement about science, technology, and medicine—eg, for assisted reproductive technologies, huge differences have emerged in the fatwas being issued by Sunni and Shia religious clerics during the past decade.¹⁶ Since 1999, new fatwas from the Shia world have allowed third-party donation as a solution to infertility and childlessness.^{12,14–16,20} Thus, in the new millennium, donor technologies and surrogacy have been used in Iran and Lebanon,^{12,16,20} both with predominantly Shia populations. They are the only two Muslim countries where third-party donation is now practised. Such differences in Sunni and Shia approaches to third-party donation have affected the moral decision making of Muslim couples who are infertile in ways that are only beginning to be realised.¹⁶

Islam and medicine in post-9/11 America Immigration of Muslims to the USA

For physicians who treat pious Muslim patients, understanding local moral worlds of Muslims seems imperative,^{59,60} especially in the USA where the immigration of Muslims has been steadily rising since 1990 (except for a small dip after 9/11).^{1,2,61} Although 50 000 Muslims were granted permanent residency in the USA in 1992, the number had increased to more than 115 000 by 2009.¹ Now, the total number of Muslims in the USA is anywhere from 2·6 million to 7·0 million.^{1,61,62} However, President Barack Obama chose to emphasise the highest number during

his 2009 New Beginning speech in Cairo, which was directed at the Muslim community worldwide.⁶³

According to a report,⁶⁴ 65% of American Muslims are foreign born, and 35% are native born (20% are native-born African-Americans). A quarter of American Muslims are immigrants from the Middle East, and other immigrants include Pakistanis, Bangladeshis, and Somalis.⁶² Most Arab-American Muslims are middle-class, having achieved higher education levels and earning higher incomes than the national averages.⁶⁴ They are more likely to be urban (94%) and entrepreneurs and business owners.⁶⁵ Most of the 3.5 million Arabs in the USA are thought to be Christian (in descending order, Roman Catholic, Eastern Orthodox, and Protestant).⁶⁵ For example, Iraqi Chaldean Catholics fled the regime of Saddam Hussein in large numbers, many of them resettling in metropolitan Detroit, MI, where they have become middle-class entrepreneurs and store owners.⁶⁶

However, new demographic trends are changing the predominantly Christian religious profile of Arab America. Nowadays, the Arab-Muslim population is one of the most rapidly growing populations in the USA.^{34,62} Since 2007, the US Refugee Admissions Program (USRAP) has been on a humanitarian mission to resettle vulnerable Iraqis, including those who have served with the US forces in Iraq.² Since the inception of USRAP, more than 60 000 Iraqi nationals have been resettled in the USA.^{2,67} This population of new Arab immigrants is different from the Arab-American population as a whole.⁶⁸ They tend to be of lower socioeconomic status, uneducated, monolingual in Arabic, and many of them are Shia Muslims. Most are refugees who have fled Middle East war zones.^{2,62} Over the past two decades, 15 of 22 Middle East countries (roughly 85% of the region's total population) have had protracted conflict situations,⁶⁹ leading to large numbers of political exiles, war refugees, and displaced individuals—also referred to as forced migration.⁷⁰ The Middle East has the largest proportion of migrants in the world, and the world's highest proportion of internally displaced individuals.⁶⁹ Three wars have been initiated by the USA since 9/11—in Afghanistan (2001), Iraq (2003), and Libya (2011; co-initiated with France and Britain). Additionally, the Arab revolts of 2011 have been met with political violence in nearly every country—Egypt, Bahrain, Yemen, Libya, and Syria—where young protesters have taken to the streets. Some of these Arab protesters and dissidents might eventually seek asylum in the USA.

Health problems

The health status of Arab-Muslim refugees and immigrants or Muslims more generally in America has only been assessed in a few studies.^{65,71,72} A review about Arab-American health provided little conclusive evidence about the risks of cardiovascular disease, diabetes, cancer, or common mental disorders in this group.⁶⁵ However, evidence suggests that acculturation, immigration, and discrimination-associated stress are some of the causes

of these problems^{67,71,73–76} as well as adverse birth outcomes among Arab-American women in the immediate 9/11 aftermath.⁶⁵ Furthermore, the results of one study showed that Arab immigrants are more likely to rate their health as fair or poor than are US-born Arabs, and this finding was especially true for Arab immigrants who did not speak English.⁷¹ The results of three studies of the mental health of Iraqi refugees have shown that they are more likely than are other Arab immigrants to be diagnosed with post-traumatic stress disorder and to have accompanying physical complaints.⁶⁵

Poverty

Although many Arab-Americans have achieved middle-class status or higher,⁶⁴ newly arriving Arab immigrants and refugees tend to have a lower income status, with many families existing below the poverty line.⁷ Poverty affects the ability of Arab-American immigrants to seek higher education, improve their standard of living, and access affordable health care. Indeed, economic impoverishment and accompanying low social class status are the main difficulties for many new Arab-Muslim immigrants to the USA.^{7,33}

Since the first Gulf War (1991–92), metropolitan Detroit, MI—including the ethnic Arab enclave community of Dearborn—has been the main receiving site for resettled Iraqis (and Lebanese Shia Muslims fleeing wars in Lebanon).^{66,77,78} However, with the automobile-based economy in decline, Iraqi resettlement to Michigan has been officially stopped by USRAP. Since March, 2011, unemployment rates for Iraqis in Michigan were nearly three times the national average of 9%, and an estimated 2000 Iraqi refugees have left the USA for other countries.⁷⁹

In our own qualitative study of the reproductive health of 95 Arab immigrants in Dearborn, MI, we noted that men who were employed in the industrial and service sectors generally held low-wage positions, with common occupations including gas station attendants, auto-mechanics, store clerks, and restaurant workers.^{7,10} During the years of severe economic recession in Michigan (2005 to now), several men in the study had become unemployed and were surviving on welfare, temporary refugee assistance, or disability pensions. In Dearborn, many Iraqi refugees were relying on the USA welfare system to supplement meagre family wages,⁸⁰ with negative implications for family structure (eg, increased rates of divorce) and reported health status.⁸⁰

Lack of health insurance

Additionally, most of the Arab refugees in the Dearborn study had extremely challenging barriers to health-care access, including lack of health insurance (after the initial months of refugee assistance), lack of well paid employment, or any form of economic support to pay medical bills.^{7,10} Few members of the study had any form of medical insurance, and thus were paying for all

health-care services out of pocket. As a form of zakat, or alms-giving, some Muslim physicians in the community provided free or discounted care, and local hospitals gathered donations from community members to pay for the medical expenses of impoverished Muslim patients who required treatment in hospital.

The degree of economic hardship and material deprivation were often discussed in our interviews.^{7,10} Most post-war refugees were unable to afford health care in the US-medical system—especially surgery—and, for many, returning to the Middle East for more affordable health care was a serious consideration.¹⁰ However, for the Iraqi (and to a lesser extent, Lebanese) refugees in the study, they feared returning to their homeland because of the ongoing war, political violence, and a fragmented health-care system.⁸¹ Thus, this Muslim-refugee population could be described as stuck in Michigan, with little chance of accessing affordable health care.

Language barriers

Many of the 95 Arab–Muslim immigrants in our Dearborn study were not adequately fluent in speaking, reading, or writing English.^{7,10} This finding was particularly true for refugee women, who, as a group, had often received less education in their home country. Language barriers were a huge hindrance to seeking effective medical care. Arabic-only speakers described their difficulty in communicating with health-care practitioners in the absence of Arabic interpreters or Arabic-language health materials. Description of symptoms was nearly impossible, and so was comprehension of treatment plans and other health-care information delivered in English. In many cases, monolingual Arabic speakers relied on either family members or friends who could speak English to accompany them to medical appointments. Many of them also sought out Arabic-speaking physicians who maintained clinics in the Dearborn community. Such language barriers—and the concomitant need for Arabic-language medical interpreters and health education aids—have been reported in other communities with large Arab-immigrant populations.^{33,71,82} Indeed, the lack of culturally competent services within the complex American health-care system presents a huge challenge for Arab immigrants in the USA.^{34,83–85}

Discrimination and distrust

The events of 9/11 have created a barrier to care among some Arab and other Muslim immigrant populations in the USA. As noted by several scholars, 9/11 reversed the general efforts of Arabs and Muslims to assimilate into white US society as an invisible (and racially unmarked) ethnic population.^{86–88} Incidents of racial discrimination, negative stereotyping, and hate crimes have all been documented in the USA (and in Europe).^{86–91} Nowadays, Muslims and Arabs are vilified by many Americans, and Arab men, particularly, are considered to be dangerous, untrustworthy, inherently violent, and fanatical.^{12,91,92} The possibility that Arab–Americans might be trustworthy,

law-abiding citizens seems to have eluded both the media and popular imagination, leaving deeply entrenched caricatures that are difficult to overcome.^{12,92} As noted by Shah and colleagues,³³

“The aftermath of September 11th damaged previously established trust between Arab American immigrants and government agencies, causing Arab American immigrants to stay away from any public service, including health care, that appears to be connected to the U.S. government.”

The main fears for Arab–Muslim men in the post-9/11 environment are of racial or religious profiling and the threat of deportation.^{33,77,91} Results of a study of Arab–American teenagers (aged 13–18 years) show that they have been forced to cope with incidents of harassment, prejudice, discrimination, and pervasive anti-Arabism.⁷⁶ In one study of 62 Islamic clergy (imams) who were leading congregations in the USA, 9/11 led to a substantial increase in counselling requests from their congregants because of increased stress and discrimination.⁹³ This finding was true for all the imams with predominantly Arab congregations, even though none of the imams in the study had received formal mental health training to deal with this increased psychosocial burden.

For Arab and other Muslim women, wearing the hijab (head covering) has singled them out for discrimination and harassment. For example, in one qualitative, focus-group study (n=36) of Arab–American immigrants in New York City, NY, women wearing the hijab were victims of physical violence or the threat of physical violence by being readily identifiable as Muslims.³³ Some were denied access to housing and public services, including health care. Many Muslim women and men in the New York study reported incidents of targeted discrimination, abuse, violence, and harassment directed at them and their children.³³ In Detroit, MI, a large-scale, post-9/11 survey of Arab–Americans showed many forms of anti-Arab discrimination, harassment, and direct violence, including from law enforcement personnel.⁷ In our own qualitative, interview-based study of 95 Arab men and women in Dearborn, which included many Iraqi refugees, some participants described interactions with non-Arab health-care providers as being either unhelpful or patronising.^{7,10} In particular, women described encountering male physicians’ negative stereotypes about Muslim women—piety, hyperfertility, and patriarchal oppression by their husbands. The results of a similar qualitative, interview-based study (n=7) undertaken in the rural southern USA showed that Muslim-immigrant women “did not feel their experiences with local health care providers were comfortable or beneficial”.⁸²

Desire for Muslim physicians

Because of their unpleasant experiences, many Arab immigrants might want a physician who is an Arab Muslim. Although Islam does not mandate that patients

seek care from a Muslim,⁹⁴ many Muslim patients would prefer to be treated by a fellow Muslim physician, based on the assumption of a shared cultural background and religious orientation to concerns about their health.⁴ For Muslim patients who are especially pious,^{41,42} the desire for a Muslim physician might be a crucial moral concern.

Subtleties of Muslim belief and comportment have major implications in the delivery of clinical care.^{5,34} For example, Muslim physicians can be expected to understand the dietary and treatment restrictions of Muslim patients, including the prohibition of products made with pork or alcohol, desire to eat only halal (Islamically butchered) meat products, or desire to fast from sunrise to sunset during the month of Ramadan (fasting though is not a requirement for patients who are pregnant or ill).^{5,34,83–85,95} Furthermore, many Muslims maintain strong spiritual beliefs about the role of God in illness and its treatment, often invoking religious proverbs such as *al-hamdu-lillah* (praise be to God) or *insha'Allah* (God willing) in narrating their illness stories. Many Muslims also believe in *hasad* (envy, or the evil eye) as a cause of illness and misfortune because it is mentioned as a source of ill health in the Quran. When the end of life is near, many Muslim patients will attempt the hajj, or pilgrimage to Mecca, Saudi Arabia, one of the five pillars of Islam. Furthermore, particular forms of washing and handling of a Muslim patient's corpse are prescribed for the purposes of immediate burial, without accompanying autopsies, embalming, or cremation. These kinds of religious requirements are of vital importance to practising Muslims, especially those who are hospitalised or receiving end-of-life care.^{5,34,53,83–85,96,97} However, they are generally poorly understood within the USA and other western health-care systems.^{5,34}

Comportment in clinical settings

Issues about modesty, such as touching and gazing between the opposite sexes, might be very important for pious Muslim patients.^{5,12,34,82–85} For example, pious Muslims are often opposed to shaking hands with members of the opposite sex.^{12,20,82,98} Instead, greetings are expressed by placing the hand over the heart. This form of greeting can be difficult for Muslim patients because American physicians routinely extend their hands in welcome.^{82,98}

Many recent fatwas have suggested that patients ideally should seek medical services from practitioners of the same sex.^{98,99} Thus, sex-matched careseeking is an increasing trend for Muslims, particularly for gynaecological, obstetric, and urological procedures. As noted by Yosef,³⁴

“It is particularly stressful for Muslim women to expose their bodies in front of male health care providers, or even to discuss sensitive topics related to women's health with them. As a result, some Muslim women might not reveal their health problems to male providers or might not even seek health care.”

Barriers to care on the basis of these gender comportment issues have been noted in several studies of Arab–American and other Muslim women.^{82–85,97,98} Muslim women might fear being alone in a room with a male physician or other practitioner, making direct eye contact with a male practitioner, answering direct questions, being asked to undress for clinical examinations, being touched by a male practitioner during clinical examinations, being asked to wear a revealing hospital gown, or to remove their headscarves. These interactions in medicine represent important Islamic bioethical challenges, which urgently need to be addressed in medical cultural competency education.⁹⁸

Religious authorities and institutions

Noteworthy is that some Muslim patients will seek the opinion of a religious authority, either before or during medical treatment. The need to confirm the permissibility of medical procedures, often in the form of a written fatwa, is part of the medical journey for many Muslim patients. For example, many Muslim couples who are infertile will seek the opinion of a local cleric before undertaking in-vitro fertilisation.^{4,6,12,20} In the absence of such a clerical meeting, couples will often seek out an authoritative fatwa for the procedure, and will bring the printed version with them to their medical appointments.^{4,12,20}

The importance of undertaking medical care that is permissible according to Islam cannot be understated. The role of Islam in medicine is as important at the beginning of life (eg, assisted conception) as it is at the end of life (eg, propriety in handling the dead body). Understanding Islamic attitudes toward the practice of medicine must be an important part of cultural competency training for health-care providers in the USA who serve Arab and other Muslim populations.^{33,34,82–85} Additionally, states with large Arab and Muslim populations—Michigan, California, New York, New Jersey, and Florida³³—should consider developing health-care programmes in partnership with local Islamic institutions (eg, mosques) and the clerics who run them.^{33,93} Indeed, creation of health-care clinics that are affiliated with Islamic institutions would be an excellent way to provide accessible services to Muslim-immigrant and Arab-refugee communities in the USA.

Conclusion

Muslim patients are encouraged to seek medical solutions to their health problems. Medical advancements are considered to be God's creation, and physicians the enablers of God's handiwork. Physicians who treat Muslim patients need to be sensitive to a variety of religious issues that directly affect clinical care. The story of Arab–Muslim refugees in post-9/11 America also shows the urgent need for research into conflict and health, and the health of Muslims in America.^{100,101} It should also spur ethical questions about health-care equity and social justice—or lack thereof—for refugees and immigrants in the USA health-care system.

Contributors

MCI wrote the first draft of the report, and GIS provided crucial additions to the text and reference section.

Conflicts of interest

We declare that we have no conflicts of interest.

Acknowledgments

The National Science Foundation, Cultural Anthropology Program, and the US Department of Education Fulbright-Hays Faculty Abroad Research Program funded the research on which this report is based. MCI was the principal investigator for both grants, and is grateful to these funding agencies for their generous support. We thank Jennifer DeChello for her bibliographic assistance.

References

- Pew Research Center. Mapping the global Muslim population. Washington, DC: Pew Research Center, 2009.
- US Citizenship and Immigration Services. Fact sheet: Iraqi refugee processing. Washington, DC: US Citizenship and Immigration Services, 2009.
- Ebrahimnejad H. What is "Islamic" in Islamic medicine? In: Guneroglu F, Raina D, eds. Science between Europe and Asia. Boston, MA: Springer, 2011: 259–70.
- Inhorn MC. Local babies, global science: gender, religion, and in vitro fertilization in Egypt. New York, NY: Routledge, 2003.
- Kridli SA. Health beliefs and practices among Arab women. *Mat Child Nurs* 2002; **27**: 178–82.
- Clarke M. Islam and new kinship: reproductive technology and the shariah in Lebanon. New York, NY: Berghahn, 2009.
- Inhorn MC, Fakhri MH. Arab Americans, African Americans, and infertility: barriers to reproduction and medical care. *Fert Steril* 2006; **85**: 844–52.
- Inhorn MC. Quest for conception: gender, infertility, and Egyptian medical traditions. Philadelphia, PA: University of Pennsylvania Press, 1994.
- Iqbal M, Noble R. Islamic identity and the ethics of assisted reproduction. In: Blyth E, Landau R, eds. Faith and fertility: attitudes towards reproductive practices in different religions from ancient to modern times. London: Jessica Kingsley, 2009: 33–44.
- Inhorn MC. Diasporic dreaming: "return reproductive tourism" to the Middle East. *Reprod BioMed Online* 2011 (in press).
- Inhorn MC. Infertility and patriarchy: the cultural politics of gender and family life in Egypt. Philadelphia, PA: University of Pennsylvania Press, 1996.
- Inhorn MC. The new Arab man: emergent masculinities, technologies, and Islam in the Middle East. Princeton, NJ: Princeton University Press, 2012 (in press).
- Inhorn MC. Healing and medicine: popular healing practices in Middle Eastern cultures. In: Jones L, ed. Encyclopedia of Religion. New York, NY: Macmillan, 2005: 3834–37.
- Abbasi-Shavazi MJ, Inhorn MC, Razeghi-Nasrabad HB, Toloo G. "The Iranian ART revolution": infertility, assisted reproductive technology, and third-party donation in the Islamic Republic of Iran. *J Middle East Wom Stud* 2008; **4**: 1–28.
- Inhorn MC. A more open mind towards Iran. *Chron Higher Educ* 2006; **B12**.
- Inhorn MC, Tremayne S. Islam and assisted reproductive technologies: Sunni and Shia perspectives. New York, NY: Berghahn, 2012 (in press).
- Inhorn MC. Assisted reproduction in global Dubai: reproductive tourists and their helpers. In: Chavkin W, Maher J, eds. The globalization of motherhood: deconstructions and reconstructions of biology and care. New York, NY: Routledge, 2010: 180–202.
- Inhorn MC. Privacy, privatization, and the politics of patronage: ethnographic challenges to penetrating the secret world of Middle Eastern, hospital-based in vitro fertilization. *Soc Sci Med* 2004; **10**: 2095–3108.
- Inhorn MC. Right to assisted reproductive technology: overcoming infertility in low-resource countries. *Int J Gynecol Obstet* 2009; **106**: 172–74.
- Clarke M, Inhorn MC. Mutuality and immediacy between marja' and muqallid: evidence from male IVF patients in Shi'i Lebanon. *Int J Middle East Stud* 2011; **43**: 409–427.
- Inhorn MC. Making Muslim babies: IVF and gamete donation in Sunni versus Shi'a Islam. *Culture Med Psychiatry* 2006; **30**: 427–50.
- Inhorn MC. Fatwas and ARTs: IVF and gamete donation in Sunni v Shi'a Islam. *J Gender Race Justice* 2006; **9**: 291–317.
- Inhorn MC. Globalization and gametes: Islam, assisted reproductive technologies, and the Middle Eastern state. In: Browner CH, Sargent CF, eds. Reproduction, globalization, and the state. Duke University Press, Durham, NC, 2010: 126–37.
- Serour GI. Islamic perspectives in human reproduction. *Reprod BioMed Online* 2008; **17** (suppl 3): 34–38.
- Serour GI, Omran A. Ethical guidelines for human reproduction research in the Muslim world. Cairo: International Islamic Centre for Population Studies and Research, Al Azhar University, 1992.
- Serour GI. Ethical implications of assisted reproductive technology in the Muslim world. Cairo: International Islamic Centre for Population Studies and Research, Al Azhar University, 1997.
- Serour GI. Ethical implications of assisted reproductive technology in the Muslim world. 2nd edn. Cairo: International Islamic Centre for Population Studies and Research, Al Azhar University, 2000.
- Serour GI. Bioethics in reproductive health: a Muslim's perspective. *Middle East Fertil Soc J* 1996; **1**: 30–35.
- Serour GI. Ethical implications of human embryo research. Rabat: Islamic Educational, Scientific, and Cultural Organization, 2000.
- Serour GI. Religious perspectives of ethical issues in ART: Contemporary ethical dilemmas. In: Shenfield F, Sureau C, eds. Assisted Reproduction. London: Informa Health Care, 2006: 99–114.
- Gallagher N. Healing and medicine: healing and medicine in Islamic texts and traditions. In: Jones L, ed. Encyclopedia of religion, 2nd edn. New York, NY: Macmillan, 2005: 3831–33.
- Nasir LS, Abdul-Haq AK. Caring for Arab patients: a biopsychosocial approach. Oxford: Radcliffe, 2008.
- Shah SM, Ayash C, Pharaon NA, Gany FM. Arab American immigrants in New York: health care and cancer knowledge, attitudes, and beliefs. *J Immigr Minor Health* 2008; **10**: 429–36.
- Yosef ARO. Health beliefs, practice, and priorities for health care of Arab Muslims in the United States: implications for nursing care. *J Transcult Nursing* 2008; **19**: 284–91.
- Lotfolian M. Islam, technoscientific identities, and the culture of curiosity. Washington, DC: University Press of America, 2004.
- Saniei M. Human embryonic stem cell research in Iran: the significance of the Islamic context. In: Inhorn MC, Tremayne S, eds. Islam and assisted reproductive technologies: Sunni and Shia perspectives. New York, NY: Berghahn, 2012 (in press).
- Tober D. Kidneys and controversies in the Islamic Republic of Iran: the case of organ sale. *Body Soc* 2007; **13**: 151–70.
- Najmabadi A. Transing and transpassing across sex-gender walls in Iran. *Wom Stud Q* 2008; **36**: 234–43.
- Tappan, R. More than fatwas: ethical decision making in Iranian fertility clinics. In: Inhorn MC, Tremayne S, eds. Islam and assisted reproductive technologies: Sunni and Shia perspectives. Berghahn, New York, 2012 (in press).
- Gurtin Z. Assisted reproduction in secular Turkey: regulation, rhetoric, and the role of religion. In: Inhorn MC, Tremayne S, eds. Islam and assisted reproductive technologies: Sunni and Shia perspectives. New York, NY: Berghahn, 2012 (in press).
- Mahmood S. Politics of piety: the Islamic revival and the feminist subject. Princeton, NJ: Princeton University Press, 2005.
- Deeb L. An enchanted modern: gender and public piety in Shi'i Lebanon. Princeton, NJ: Princeton University Press, 2006.
- Atighetchi D. Islamic bioethics: problems and perspectives. New York, NY: Springer, 2008.
- Brockopp JE, Eich T. Muslim medical ethics: from theory to practice. Columbia, SC: University of South Carolina Press, 2008.
- Brockopp JE. Islamic ethics of life: abortion, war, and euthanasia. Columbia, SC: University of South Carolina Press, 2003.
- Sachedina A. Islamic biomedical ethics: principles and application. Oxford: Oxford University Press, 2009.
- Hamdy S. Rethinking Islamic ethics in Egypt's organ transplant debate. In: Brockopp JE, Eich T, eds. Muslim medical ethics: from theory to practice. Columbia, SC: University of South Carolina Press, 2008: 78–96.
- Kazim F. Islamic bioethics: critical analysis of Pakistan Medical and Dental Council's code of ethics. Saarbrücken: VDM Verlag, 2010.

- 49 Yacoub AAA. The fiqh of medicine: responses in Islamic jurisprudence to developments in medical science. London: Ta-Ha Publishers, 2001.
- 50 Moazzam F. Bioethics and organ transplantation in a Muslim society: a study in culture, ethnography, and religion. Bloomington: Indiana University Press, 2006.
- 51 Abul Fadl ME. Organ transplant, euthanasia, cloning and animal experimentation: an Islamic view. Leicester: Islamic Foundation, 2001.
- 52 Sajoo AB. Muslim ethics: emerging vistas. London: Tauris, 2004.
- 53 Rady MY, Verheijde JL, Ali MS. Islam and end-of-life practices in organ donation for transplantation: new questions and serious sociocultural consequences. *HEC Forum* 2009; **21**: 175–205.
- 54 Muhammad I, Mikhtar A, Habib A. The Islamic perspective on organ donation in Pakistan: renal data from the Asia-Africa. *Saudi J Kidney Dis Transplant* 2009; **20**: 154–55.
- 55 Eich T. Muslim voices on cloning. *ISIM Newsletter* 2002; **12**: 38–39.
- 56 Moosa E. Human cloning in Muslim ethics. *Voices Across Boundaries* 2003; **Fall**: 23–24.
- 57 Gad El Hak AGE. In vitro fertilization and test tube baby. *Dar Al Iftaa*, Cairo, Egypt, 1980, 1225; **1**: 3213–28.
- 58 Inhorn MC, Patrizio P, Serour GI. Third-party reproductive assistance around the Mediterranean: comparing Sunni Egypt, Catholic Italy, and multisectarian Lebanon. *Reprod BioMed Online* 2010; **21**: 848–53.
- 59 Kleinman A, Kleinman J. Local worlds of suffering: an interpersonal focus for ethnographies of illness experience. *Qualit Hlth Res* 1992; **2**: 127–34.
- 60 Kleinman A. Writing at the margins: discourse between anthropology and medicine. Berkeley, CA: University of California Press, 1997.
- 61 Leonard KI. Muslims in the United States: the state of research. New York, NY: Russell Sage Foundation, 2003.
- 62 Pew Research Center. The future of the global Muslim population: projections for 2010–2030. Washington, DC: Pew Research Center, 2011.
- 63 The White House Blog. The President's speech in Cairo: a new beginning. <http://www.whitehouse.gov/blog/NewBeginning>. (accessed Aug 5, 2011).
- 64 Pew Research Center. Muslim Americans: middle class and mostly mainstream. Washington, DC: Pew Research Center, 2007.
- 65 El-Sayed AM, Galea S. The health of Arab-Americans living in the United States: a systematic review of the literature. *BMC Public Health* 2009; **9**: 272–80.
- 66 Abraham N, Shryock A. Arab Detroit: from margin to mainstream. Detroit, MI: Wayne State University Press, 2000.
- 67 Read JG, Amick B, Donato KM. Arab immigrants: a new case for ethnicity and health? *Soc Sci Med* 2005; **61**: 77–82.
- 68 Bukhari ZH, Nyang SS, Ahmad M, Esposito JL. Muslims' place in the American public square: hopes, fears, and aspirations. Walnut Creek, CA: AltaMira, 2004.
- 69 Mowafi H. Conflict, displacement and health in the Middle East. *Global Public Health* 2011; **6**: 472–87.
- 70 Dufoix S. Diasporas. Berkeley, CA: University of California Press, 2008.
- 71 Abdulrahim S, Baker W. Differences in self-rated health by immigrant status and language preference among Arab Americans in the Detroit metropolitan area. *Soc Sci Med* 2009; **68**: 2097–103.
- 72 Shara NM, Carter EA, Abu-Bader S, Deshields A, Fokar A, Howard BV. Cardiovascular disease risk factors in Arab Americans living in metropolitan Washington, DC. *Curr Cardio Risk Rep* 2010; **4**: 181–85.
- 73 Jamil H, Fakhouri M, Dallo F, Templin T, Khoury R, Fakhouri H. Disparities in self-reported diabetes mellitus among Arab, Chaldean, and black Americans in southeast Michigan. *J Immigr Minor Health* 2008; **10**: 397–405.
- 74 Abdulrahim S, Ajrouch K. Social and cultural meanings of self-rated health: Arab immigrants in the United States. *Qual Health Res* 2010; **20**: 1229–40.
- 75 Dallo FJ, Schwartz K, Ruterbusch JJ, Booza J, Williams DR. Mortality rates among Arab Americans in Michigan. *J Immigr Minor Health* 2011; published online Feb 12. DOI:10.1007/s10903-011-9441-1.
- 76 Ahmed SR, Kia-Keating M, Tsai KH. A structural model of racial discrimination, acculturative stress, and cultural resources among Arab American adolescents. *Am J Community Psychol* 2011; published online Feb 2. DOI:10.1007/s10464-011-9424-3.
- 77 Baker W, Howell S, Jamal A, et al. Citizenship and crisis: Arab Detroit after 9/11. New York, NY: Russell Sage, 2009.
- 78 Walbridge LS, Aziz TM. After Karbala: Iraqi refugees in Detroit. In: Abraham N, Shryock A, eds. Arab Detroit: from margin to mainstream. Detroit, MI: Wayne State University Press, 2000: 321–42.
- 79 Sheppard C. Hard time for Iraqi refugees in weak US job market. 2011. <http://www.reuters.com/assets/print?aid=USTRE7226LD20110303> (accessed Aug 5, 2011).
- 80 Aswad BC. Attitudes of Arab immigrants toward welfare. In: Suleiman M, ed. Arabs in America: building a new future. Philadelphia, PA: Temple University Press, 1999: 177–99.
- 81 Inhorn MC, Kobeissi L. The public health costs of war in Iraq: lessons from post-war Lebanon. *J Soc Aff* 2006; **23**: 13–47.
- 82 Simpson JL, Carter K. Muslim women's experiences with health care providers in a rural area of the United States. *J Transcult Nurs* 2008; **19**: 16–23.
- 83 Mohammadi N, Evans D, Jones T. Muslims in Australian hospitals: the clash of cultures. *Int J Nurs Pract* 2007; **13**: 310–15.
- 84 Davidson JE, Boyer ML, Casey D, Matzel SC, Walden D. Gap analysis of cultural and religious needs of hospitalized patients. *Crit Care Nurs Q* 2008; **31**: 119–26.
- 85 Aboul-Enein BH, Aboul-Enein FH. The cultural gap delivering health care services to Arab American populations in the United States. *J Cult Divers* 2010; **17**: 20–23.
- 86 Jamal A, Naber N. Race and Arab Americans before and after 9/11: from invisible citizens to visible subjects. Syracuse, NY: Syracuse University Press, 2008.
- 87 Naber N. Ambiguous insiders: an investigation of Arab American invisibility. *Ethnic Racial Stud* 2000; **23**: 37–61.
- 88 Ajrouch KJ, Jamal A. Assimilating to a white identity: the case of Arab Americans. *Int Migrat Review* 2007; **41**: 860–79.
- 89 Suleiman MW. Arabs in America: building a new future. Philadelphia, PA: Temple University Press, 1999.
- 90 Marvasti A, McKinney KD. Middle Eastern lives in America. Lanham, MD: Rowman and Littlefield, 2004.
- 91 Howell S, Shryock A. Cracking down on diaspora: Arab Detroit and America's "War on Terror." *Anthro Q* 2003; **76**: 443–62.
- 92 Shaheen J. Guilty: Hollywood's verdict on Arabs after 9/11. New York, NY: Olive Branch Press, 2008.
- 93 Ali OM, Milstein G, Marzuk PM. The imam's role in meeting the counseling needs of Muslim communities in the United States. *Psychiat Serv* 2005; **56**: 202–05.
- 94 Al-Kassimi M. Cultural differences: practicing medicine in an Islamic country. *Clin Med* 2003; **3**: 52–53.
- 95 Herrag M, Lahmiti S, Yazidi AA, Ramadan: a different side of the emergencies? *Afr Health Sci* 2010; **10**: 215–16.
- 96 Azaizeh H, Saad B, Cooper E, Said O. Traditional Arabic and Islamic medicine: a re-emerging health aid. *CAM* 2007; **7**: 419–24.
- 97 Padela AI. Islamic medical ethics: a primer. *Bioethics* 2007; **21**: 169–78.
- 98 Padela AI, Rodriguez del Pozo P. Muslim patients and cross-gender interactions in medicine: an Islamic bioethical perspective. *J Med Ethics* 2011; **37**: 40–44.
- 99 McLean M, Al Ahababi S, Al Ameri M, Al Mansoori M, Al Yahyaie F, Bersen R. Muslim women and medical students in the clinical encounter. *Med Educ* 2010; **44**: 306–15.
- 100 Inhorn MC. Medical anthropology against war. *Med Anthropol Q* 2008; **22**: 416–24.
- 101 Moran M, Khawaja M, Khoshnood K, Ramahi T, Inhorn MC. Violent conflict and population health in the Middle East. *Global Public Health* 2011; **6**: 467–71.