GOJO INDUSTRIES – EUROPE LIMITED
Unit 5 & 6, Stratus Park
Brinklow, Milton Keynes
MK10 0DE
Tel: +44 (0) 1908 588444
Fax: +44 (0) 1908 588445
Website: www.GOJO.com

09 February 2012

USE OF GOJO ALCOHOL BASED HYGIENIC HAND RUB UNDER DIFFERENT CULTURAL SETTING

As a leading manufacturer and distributor of alcohol based hygienic hand rub products, GOJO support, promote and comply with various World Health Organisation (WHO) initiatives and guidelines. The guidelines include the **WHO Guideline on Hand Hygiene in Health Care (Patient Safety)**, which contains a section on, **"Religion and cultural aspects of hand hygiene" section 17**.

GOJO Customers concerned about the use of alcohol based hand rub under their specific cultural setting may consult this WHO Guideline.

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Bonnie Okeke, PhD. PG Dip. Law

Regulatory Affairs and Product Quality Management - Europe
GOJO Industries-Europe Ltd

Muslim health-care workers and alcohol-based handrubs

Qanta A Ahmed, Ziad A Memish, Benedetta Allegranzi, Didier Pittet, on behalf of the WHO Global Patient Safety Challenge

Hand hygiene is the cornerstone of prevention of health-care-associated infection.[1,2] Evidence suggests that topical alcohol-based solutions are better than detergent-based cleansers for improving compliance and effectiveness of hand hygiene in health-care settings.[2–6] However, the UK National Patient Safety Agency (NPSA; Glenister H, personal communication) and others[7–9] have recently reported that some Muslim health-care workers consider that they are unable to comply with these new recommendations, citing religious objections. In Islam, consumption of alcohol is expressly forbidden, designated as *haram* in the Qur'an.

The implementation of effective hand-hygiene practices remains a challenge, since poor compliance among health-care workers is well documented.[2,10,11] Successful strategies to promote these practices must be multimodal in approach and implementation.[2–4,6] The challenges include system changes, education and motivation of health-care workers, heightened administrative support, and, in some instances, empowerment of patients.[2–6,12–14] A key element for improved compliance lies in changing attitudes and behaviour.[2,15] To achieve these changes, the rationale for established habits must first be understood.

Migration and travel are now more extensive than ever. Immigration has noticeable effects on the composition of populations of patients and health-care workers. Consequently, diverse cultural beliefs within the workplace become more prevalent. Cultural awareness is crucial to effectively implement good clinical practice in pace with changing, diverse populations and unfolding scientific developments.[7,8]

Disinclination on the part of health-care workers to adopt effective hand-hygiene measures could influence those who seek to emulate these workers as role models, in particular senior doctors.[16–18] Following the Patient Safety Alert issued in September, 2004, by the NPSA, calling for universal adoption of alcohol-based handrubs at the point of care across all acute care hospitals, concerns about the use of these rubs have been expressed to the NPSA by Muslim health-care workers, patients, and relatives, by trusts and through questions raised at conferences (Glenister H, NPSA, personal communication). Risk assessment before the launch of the "*clean**your**hands*" campaign, modelled on the multi-faceted approach described by Pittet and colleagues,[4] identified religious and cultural issues as possible genuine problems in clinical practice. Since 2000, D Pittet has served as an external adviser for the preparation and future implementation of the NPSA "*clean**your**hands*" campaign. In particular, he was consulted by the NPSA on specific issues related to the use of alcohol among Muslim health-care workers, including the case of a professional woman who experienced severe family opposition to her use of an alcohol-based handrub.

Having identified this potential challenge to compliance with hygiene practice,[7] we speculate on explanations for and responses to this newly-reported behaviour. Part of the work presented in this paper results from consultation of experts and religious group leaders, an extensive literature search, and a review of the Qur'an undertaken within the framework of the WHO Guidelines for Hand Hygiene in Health Care, WHO Global Patient Safety Challenge of the World Alliance for Patient Safety.[19]

The growing Muslim population

There are an estimated 1·2 billion Muslims worldwide,[20] and Muslims now represent 4% of the total European population.[21–23] The yearly growth rate of Islam is estimated at 2·9–6·4%,[24] faster than that of the total world population, which increases by 2·3% yearly. With the Muslim population growing so rapidly, there is a need for all health-care workers to be better informed of beliefs and cultural practices that might affect Muslim colleagues' attitudes to prescribed behaviours in the workplace.

Islam is the religion revealed to the prophet Mohammed in 610 AD over a 23-year period. These revelations are recorded in the Qur'an, which encompasses an entire code of life for all Muslims and provides divine guidance on the most important aspects of life. The word Islam is derived from the Arabic root "Salam", meaning peace, purity, submission, and obedience; in the religious sense, it means submission to the will of Allah (God) and obedience to His law. For Muslims, the Qur'an provides pertinent guidance and counsel that remains relevant even now, more than 1400 years later. Instruction related specifically to maintaining health and mandating strict codes of personal hygiene is revealed in the Qur'an.

Ritual hygiene in Islam

In several cultures and religions, including Islam, hand hygiene is not only an action aimed at body care. It is done also for ritual reasons during religious ceremonies or because it bears a symbolic meaning in specific everyday life situations. According to some religions, the concept of dirt is not strictly linked to the sight of any visibly soiled spot, but reflects a wider meaning that refers to interior and exterior purity.[25,26] The need for hand hygiene might therefore be perceived more strongly and frequently by some strictly religious people, and opportunities for cleaning hands may be an issue to consider for health-care workers in some religious groups.

Rituals of cleanliness and purity in religion are far from unique to Islam. Denoting matter as pure or impure, clean or unclean, permitted or forbidden, has been a recurring theme noted by anthropologists as a method of

Lancet 2006; 367: 1025–27

Division of Pulmonary and Critical Care Medicine, Allergy and Clinical Immunology, Medical University of South Carolina, Charleston, SC, USA (Q A Ahmed MD); **Adult Infectious Disease Section, Department of Medicine, and Infection Prevention and Control Programme, Saudi Arabian National Guard Health Affairs, King Abdulaziz Medical City, King Fahad National Guard Hospital, Riyadh, Saudi Arabia** (Z A Memish MD); **Department of Infectious Diseases, University of Verona, Verona, Italy** (B Allegranzi MD); **Infection Control Programme, University of Geneva Hospitals, Geneva, Switzerland** (Prof D Pittet MD); **and WHO Global Patient Safety Challenge, World Alliance for Patient Safety WHO Headquarters, Geneva, Switzerland** (Prof D Pittet)

Correspondence to:
Prof D Pittet
didier.pittet@hcuge.ch

For the "***clean**your**hands***" **campaign** website see http://www.npsa.nhs.uk/cleanyourhands

ordering society and rationalising environment. Douglas,[27] in her studies of taboo, which she describes as a "spontaneous device for protecting the distinctive categories of the universe", and her observation that ambiguity (of any substance) leads to discomfort, notes holiness and impurity to be at opposite poles of the spectrum.

Of the five basic tenets of Islam, observing regular prayer five times daily is one of the most important. Personal cleanliness is paramount to worship in Islam. Muslims must complete methodical ablutions before praying, and explicit instruction is given in the Qur'an as to precisely how Muslims should wash. Ablutions must be made in freely running (not stagnant) water and involve washing of the hands, face, forearm, ears, nose, mouth, and feet, three times each. Additionally, hair must be dampened with water. Thus, every observant Muslim is required to maintain scrupulous personal hygiene five times a day, aside from his or her usual routine of bathing. These habits are observed by Muslims of all races, cultures, and ages.

Apart from the Qur'an, other references exist to guide Muslims. The ways in which the prophet Mohammed lived are documented in the *Hadith* and the *Sunna*, and provide additional observations on the emphasis given to personal hygiene in Islam and the specific prominence on hand hygiene. The prophet Mohammed always urged Muslims to wash hands frequently[28] and after clearly delineated tasks: before and after meals; after visiting the lavatory; after touching a dog, a cadaver, or one's shoes; and after handling anything soiled or in some way suspect. Hence, from the dawn of Islam, strict observation of hand hygiene with freely running water has been advocated for all Muslims. Nevertheless, a small minority of Muslim health-care workers have expressed reluctance or, in a small number of cases, refusal[7] to adhere to the current strategies for hand hygiene that are based on use of alcohol-based handrubs.[2,6,8] We believe this reluctance arises because of the specific interpretation of alcohol as a *haram* (forbidden) substance.

Alcohol use and Islam

Alcohol is clearly designated as *haram* in Islam because it is a substance leading to *Sukr* (intoxication). For Muslims, any agent or process leading to a disconnection from a state of awareness or consciousness (a state in which he or she may forget the creator) is called *Sukr*, which is *haram*. Consequently, an enormous taboo has become attached to consumption of alcohol for all Muslims. Although most understand that abstinence from alcohol can have substantial benefits on health, many overlook that alcohol as a medicinal agent is permitted within Islam. Indeed, any substance that man can manufacture or develop in order to alleviate illness or aid health is permitted. In this capacity, the substance is not used as an agent of *Sukr*. For example, cocaine is permitted as a local anaesthetic (*halal*, allowed), but inadmissible as a recreational drug (*haram*). This distinction enables the Muslim health-care worker to engage in evolving technology and emerging science, including acceptance of new applications of substances clearly deemed *haram*.

The topic of medicines containing alcohol and narcotics was discussed during the 16th meeting of the Muslim Scholars' Board of the World Muslim League in Mecca, Saudi Arabia, in January, 2002. Several recommendations were made, and medicines that contain alcohol in any concentration have since been deemed permissible by the World Muslim League if no substitute exists.

Furthermore, alcohol has long been a component present in household cleaning agents and other materials for public use such as perfume, without legislated restriction for Muslims. In these instances, the alcohol content is permitted because it is not for ingestion.

Concerns have been expressed about the potential systemic diffusion of alcohol or its metabolites after dermal absorption or airborne inhalation related to the use of alcohol-based handrub.[8] This issue was also discussed within the framework of the preparatory phase of the NPSA "*clean**your**hands*" campaign in the UK. Available scientific data are limited at present, although some published[29] and unpublished data (Kramer A, Institute of Hygiene and Environmental Medicine, Greifswald, Germany, personal communication) show that the amount of alcohol absorbed is negligible. Further studies need to be done to provide a definitive answer to this question.

Islamic theology and health-care interface

Parallels of religious belief and clinical practice interface in Saudi Arabia on a daily basis. The health-care system thrives within the governance of Islamic Law and provides a useful indicator of current Islamic attitudes, as shown by the following two examples.

At the Saudi Arabian National Guard Health Affairs (SANG-HA) hospitals, use of alcohol-based handrub has been permitted since 2003, and is now mandatory for all staff. No difficulties or reluctance to adopt these formulations have been encountered. Even though Saudi Arabia is the accepted Custodian of the Two Holy Mosques (at Mecca and Medina) and is considered to be the spiritual epicentre of Islam, no state policy or permission was sought in implementing alcohol-based rubs for hand cleansing in this major, government-funded, military hospital.

However, at SANG-HA hospitals, most health-care workers are expatriates, often either non-Muslim or, if Muslim, highly selected professionals with "western" training and sensibilities. Therefore, their attitude to alcohol-based handrub agents may be different to that of Muslim health-care workers in facilities elsewhere. However, no other hospitals in Saudi Arabia, or indeed in the Gulf states, have reported any inability to comply because of religious beliefs. Alcohol-based handrub has been installed recently in more than 200 public hospitals

in Saudi Arabia (Ishag AH, personal communication). We find this regional acceptance encouraging, and believe that it demonstrates that alcohol-based handrub solutions are indeed tolerable to most Muslim health-care workers.

All health-care workers should be aware of the cultural preferences of colleagues. We must seek these insights as adamantly as we seek to understand our patients' belief systems. Although we have mainly discussed experiences in Saudi Arabia and the UK, these issues might also be relevant to other religious and cultural contexts. Unfortunately, no systematic review of this topic is currently available, and further investigations are needed to delineate the extent to which religious beliefs might affect health-care practices, if at all.[7,8,15] In the UK, issues encountered in relation to religion and culture seem to be surmountable, and alcohol-based handrubs have been successfully introduced in all acute care hospitals. Challenges relating to use of alcohol-containing formulations are likely to be more frequently encountered,[7] since such formulations are now seen as the gold standard for hand hygiene during care of patients, as reflected in guidelines currently under development within the scope of the Global Patient Safety Challenge 2005–06 of the WHO World Alliance for Patient Safety.[19,30]

Increased awareness of Muslim health-care workers' beliefs and anxieties could improve compliance with accepted hand-hygiene practices.

As medicine advances faster than we can assimilate required changes in attitudes and ethical beliefs, we will see an increasing number of interfaces between science and belief—interfaces that may take time to resolve. Today's health-care delivery systems must be sensitive to a range of personal religious and cultural beliefs and take these into consideration.

Conflict of interest statement

We declare that we have no conflict of interest.

Acknowledgments

We thank the group of international experts and WHO members who worked to the development of the Global Patient Safety Challenge, in particular for their participation in the two international WHO Consultations, review of the available scientific evidence, writing of the WHO draft Guidelines on Hand Hygiene in Health Care, and fostering discussion among authors and members of the different Task Forces and working groups. The complete list of participants in the development of the Guidelines documents is available at http://www.who.int/patientsafety/events/05/27AprilParticipantList.pdf (accessed Dec 22, 2005). We also thank the Patient Safety team and other WHO staff from all the departments involved at Headquarters and in the Regional Offices for their work. Didier Pittet also wishes to thank the members of the Infection Control Programme at the University of Geneva Hospitals, and Rosemary Sudan for providing editorial assistance and outstanding support.

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