A Survey to Assess Knowledge Among International Colorectal Clinicians and Enterostomal Therapy Nurses About Stoma-related Faith Needs of Muslim Patients

Fareed Iqbal, MBChB, MRCS (Eng), BMedSc; Zainab Batool, MBChB; Sarah Varma, BSc(Hons), RGN; Douglas Bowley, MBBS, FRCS(Eng); and Carolynne Vaizey, MD, FRCS (Eng), FCS(SA), MBChB

Abstract
Quality of life after the creation of a stoma can be influenced by religious factors. Enterostomal specialist nurses often offer holistic preoperative counseling to discuss religious concerns with Muslim patients, which requires a sound working knowledge of relevant Islamic practices. To assess colorectal surgeon and enterostomal specialist nurse awareness of Islamic practices that influence quality of life in Muslim patients with stomas, a questionnaire comprised of 16 multiple-choice questions was developed and face and content validity established. In addition to the knowledge questionnaire, participant demographic data, including practice setting and geographical location, years in practice, and personal religious affiliation, were included in the data collection instrument. The questionnaires were sent to all members of the World Council of Enterostomal Therapists (WCET) and the Association of Coloproctology of Great Britain and Ireland (ACPGBI) via association-directed emails. Data were collected over a 5-month period; 132 responses (90 enterostomal nurses and 42 surgeons) were received. Among the 90 WCET respondents, 29 (32%) were from the United Kingdom and Europe, 24 (27%) from the United States, and 10 (11%) from Australasia, and 10 (11%) from South East Asia. All 42 ACPGBI respondents were consultant colorectal surgeons from the UK and Ireland. Eight (8) out of 42 surgeons (20%) and 11 out of 85 nurses (11%) did not feel confident to discuss religious practices before surgery. Of the 127 respondents who answered the question, only four (<5%) correctly identified all Islamic prayer positions. Thirty-two (32, 52%) of the 62 enterostomal therapists and 27 (73%) of the 37 surgeons responding did not discuss fasting with Muslim stoma patients. More than one third of all respondents (48 out of 126) did not feel it was necessary to include religious leaders in the counseling process. Awareness of Islamic practices relevant to Muslim persons with ostomies may be suboptimal among colorectal specialists, which may negatively affect patient experiences after stoma surgery. Further research is required to assess the impact of faith-based counseling on postoperative quality of life in Muslim patients.

Keywords: stoma, Islam, survey, healthcare practices

Index: Ostomy Wound Management 2014;60(5):28–37

Potential Conflicts of Interest: Mr. Iqbal and Mr. Bowley are on the executive committee of the Muslim Ostomy Association, a nonprofit organization designed to offer advice and support to Muslims with an ostomy.
A significant level of social deprivation is reported among the 2.7 million Muslims living in the United Kingdom, demonstrated by the highest rates of unemployment, higher occupancy rates in government-assisted housing, and poorer health-related outcomes compared to any other faith group. The burden of chronic disease and self-reported ill-health is greatest among UK Muslims when compared with non-Muslim groups of similar ethnic origin. These statistics are somewhat surprising, given the Islamic emphasis on health and well-being.

Among UK Muslim communities, religion is deeply embedded within social and cultural customs and is commonly used as a form of identity. Health inequalities may be driven by religious factors, real or perceived, that impact health-seeking behaviors. Despite a disproportionately higher use of acute medical services, engagement with disease-preventive initiatives such as bowel cancer screening is strikingly poor among UK Muslims when compared with other religious groups who share common health beliefs.

Colorectal cancer is the third most common malignancy in the UK and the second leading cause of cancer-related death. According to some epidemiological series, UK-based South Asians, the majority of whom are Muslim, are considered at high risk for colorectal cancer-related death because most present with advanced staged disease. Despite noteworthy advances, long-term intestinal stomas are not always avoidable, particularly with late-stage cancers.

According to a number of retrospective, observational studies, Muslims are averse to stoma creation, partly due to disruption of religious practices following stoma surgery. Observant Muslims pray five times daily; each prayer consists of a series of physical movements that include standing, sitting, bowing, and prostrating. Prayers can be offered individually or within congregation; the latter is preferred. Ritual purification for prayer is mandatory; failure voids an individual’s prayer. Muslims must wash the perianal skin thoroughly after defecation, followed by washing of the hands, face, arms, and feet. Ritual ablation washes away substances from the body deemed religiously impure, such as feces, urine, blood, and semen. An intestinal stoma can be perceived as impure and deter Muslim patients with colorectal disease from surgical intervention. Concerns over religious practice including hindrance of ritual ablation, practical difficulties in performing prayers, and obstacles to joining congregational prayers have important bearing on quality of life and influence psychological morbidity.

Ramadan is an important event in the Islamic calendar, and fasting during this time constitutes one of the five pillars of Islam. Healthy Muslims observe fasts during daylight hours. Given the general paucity of evidence relating to the safety of fasting in patients with stomas, Muslims may receive little or no advice and avoid fasting altogether, leading to inferior faith-related quality of life. Similarly, some Muslims may opt to fast and suffer negative health consequences, particularly if they have high-output stomas. According to a multicenter, cross-sectional study from Turkey, the overall number of Muslims who fasted before stoma surgery decreased 44% after stoma formation, and the proportion who prayed regularly decreased 21%.

Studies supporting these findings highlight the negative effects of a stoma on overall quality of life in Muslim patients after surgery, many of which relate to faith factors. A retrospective study of 178 patients who underwent curative surgery for colorectal carcinoma with or without a permanent ostomy found that aspects of fasting and prayers were severely impaired in Muslim ostomates compared to those who avoided a permanent ostomy. In a prospective cohort study, Celasin et al found that reduced quality of life among Muslims with an ostomy can be ameliorated if patients undergo appropriate faith counseling pre- and postoperatively. However, a qualitative study by Herek et al found insufficient information and difficulties obtaining adequate education from healthcare professionals were dominant factors contributing to the majority of Muslim ostomates refrain from religious practices after stoma formation. Of note: almost all of these studies were conducted in Islamic countries where access to Islamic counseling concurrent to standard medical care may be relatively more attainable than for Muslims living in western countries where colorectal specialists may fail to fully appreciate and understand the religious implications of an intestinal stoma in Muslim patients. Although this issue has been acknowledged, understanding of the impact of a stoma on religious rituals has never been formally investigated.

Enterostomal therapists offer stoma counseling by tailoring treatment plans to patient-specific needs. This approach can minimize the impact of a stoma on postoperative quality of life. Enterostomal therapists thus hold integral roles within colorectal clinical teams to meet with and discuss potential religious obstacles with patients as part of the preoperative assessment. The benefits of such an encounter depend
1. What religious factors influence stoma surgery in Muslim patients?

Type of Hospital
- District General Hospital
- Tertiary Referral Centre (specialist unit)
- University Hospital
- Other (please specify)

Geographical location:
- UK and Europe
- USA
- Canada
- South America
- Middle East
- Africa
- Australasia
- South East Asia
- Far East

Years as Stoma Therapist
- <5 years
- 5–10 years
- 10–15 years
- >15 years
- Other (please specify)

Ethnicity:

Which of the following faith group best describes your religion?
- Agnostic
- Atheist
- Buddhism
- Christianity
- Hinduism
- Islam
- Jainism
- Judaism
- Other (please specify)

This section attempts to examine your understanding of the Islamic faith.

6. How many times a day do Muslims pray?
- 1
- 3
- 5
- 7

7. Which positions are involved in a Muslim’s daily prayer? (Tick as many as appropriate)
- Bowing
- Crouching
- Kneeling
- Lying down
- Prostrating
- Sitting
- Standing
- No idea

8. Which of the following body parts must be washed prior to a Muslim praying? (Tick as many as appropriate)
- Anal region
- Axillae
- Chest
- Ears
- Elbows
- Face
- Feet
- Genitalia
- Knees

9. Which of the following factors may invalidate the prayer of a Muslim patient? (Tick as many as appropriate)
- Blood on clothing
- Faeces on clothing
- Intoxication
- Menstruation
- Passing flatus
- Postcoital
- Smelling flatus/faeces
- Urine on clothing

10. When consenting a Muslim patient for stoma, do you enquire about their religious practice?

How often
- Never
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- Always

11. What is the ideal site for a stoma in a Muslim patient?
- Left iliac fossa
- Left upper quadrant
- Right iliac fossa
- Right upper quadrant

12. Do you feel it is within the job description of a stoma therapist to discuss religious sensitivities prior to surgery?
- Yes
- No

13. Who should be involved in the counseling process of a Muslim patient undergoing surgery for a stoma? (Tick as many as appropriate)
- Clinical psychologist
- Family member
- Islamic Priest
- Stoma therapist
- Support group
- Surgeon
- Other (please specify)

14. Are there any protocols in place within your department that offer religious counseling for Muslim patients prior to stoma surgery?
- Yes
- No
- Don’t know

15. During Ramadan, Muslims fast for a period of 30 days during daylight hours. What advice do you give Muslim patients with a stoma?
- Advise to continue fasting
- Advise to refrain from fasting
- No special advice given
- Other (please specify)

16. Have you been in a situation where a Muslim patient has refused a stoma?
- Yes
- No

17. If yes, did you inquire about religious reasons for refusal?
- Yes
- No

Thank you very much for taking the time to complete this questionnaire. We hope to use these data to improve preoperative counseling for Muslim patients.

Figure 1. Islamic awareness questionnaire
on the specialists’ working knowledge and awareness of the religious practices of this faith group.

This study aimed to assess enterostomal nurse therapist and colorectal surgeon awareness of the specific religious practices of Muslim patients in relation to intestinal stomas.

**Methods**

A questionnaire comprising 16 multiple-choice items was devised to assess respondents’ knowledge of the Islamic faith, associated religious practices, and the application of this knowledge to health-related strategies (see Figure 1). The questionnaire was designed by the authors during focus groups with Muslims who have a stoma (n = 10) and Islamic faith leaders as described elsewhere. Content validity was assessed by three Muslims with a stoma and two Muslim consultant colorectal surgeons. Construct validation was performed by 15 randomly selected Muslims with a strong knowledge of Islam recruited from Green Lane Mosque, Birmingham UK, and four non-Muslim colorectal surgeons (one Egyptian, two Christian, and one Hindu) recruited from Heart of England NHS trust. Scores between Muslim and non-Muslim validation groups were significantly different (P <0.005), with the Muslims scoring higher average scores. This prevalidation determined the questionnaire was able to discriminate between persons with a good or poor working knowledge of Islam. Criterion-related validation of the questionnaire was not possible due to lack of available standardized Islamic awareness tools.

The questionnaire was created using SurveyMonkey® and written in English. Basic demographic data, including number of years working as a colorectal specialist, ethnic origin, and religion, were collected; the anonymity of study participants was respected. Respondents were given the opportunity to make general comments after completing the questionnaire. The final questionnaire was emailed to the secretaries of the World Council of Enterostomal Therapists (WCET) and surgeons from the Association of Coloproctology of Great Britain and Ireland (ACPGBI) who forwarded the questionnaire to their members. Data were collected over a 5-month period (October 2010 to February 2011). The link to the online questionnaire, hosted through SurveyMonkey®, was sent within the body of the invite email. Each respondent was given a single opportunity to complete the questions (each respondent was linked to a particular IP address).

Data were processed and collated by the server and presented in an Excel spreadsheet. Data were extracted and analyzed by three of the authors. Given the low return rate, data were analyzed using descriptive statistics only.

**Results**

**Demographics.** Ninety (90) members of the WCET (nurses) and 42 members of the ACPGBI (surgeons) completed the questionnaire in full and were included in the data set; questionnaires from 30 WCET and 15 ACPGBI members were incomplete and were discarded. Incomplete was defined as three or more questions not answered. The total number of respondents varies by question; some questions were not answered by all respondents. However, if demographic data were missing and no more than three questions were unanswered, the information was included in the data set. “Other” was an option for the geographic question. Data collected from the online server showed that 313 people had clicked the email link. This assumed a response rate of 57% and a completion rate of 42%. Among the 90 WCET respondents, 29 (32%) were from the UK and Europe, 24 (27%) from the United States, and 10 each (11%) were from Australasia and South East Asia. All 42 ACPGBI respondents were consultant colorectal surgeons from across the UK and Ireland.

Of the 86 nurses who responded to the question, 52 (60%) described themselves as Christian, 12 (14%) as Muslim, and 16 (4%) as “no religion.” Among the 42 surgeons responding,
the majority (34, 80%) described themselves as Christian, (six, 14%) Muslim, and (two, 4%) as “other.”

In terms of practice setting, 29 out of 67 nurses (43%) and 25 out of 41 surgeons (71%) worked in a District General Hospital; 24 out of 67 nurses (35%) and 14 out of 41 surgeons were based at a university hospital. The majority of nurses (69 out of 89, 78%) and surgeons (33 out of 40, 83%) had more than 5 years’ experience.

**Knowledge of prayers and fasting advice.** Although 67 out of 85 nurses (75%) and 28 out of 39 surgeons (72%) recognized Muslims prayed five times daily, only four (3%) of the 127 total respondents correctly identified all the positions involved in the Muslim prayer. However, 31 out of 86 nurses (36%) and 19 out of 41 surgeons (46%) correctly indicated prostrating is part of prayer.

Patients often are advised not to continue fasting during the month of Ramadan: of the 62 nurses responding, 16 (26%) supported the practice, while one advised patients to refrain from fasting. Thirty-two nurses (52%) and 27 surgeons (73%) responded they did not provide specific advice regarding fasting.

**Hygiene in Islam.** In questions relating to hygiene in Islam, an overwhelming majority (94 out of 111, 86%) failed to identify genitalia and anal regions as mandatory body parts that must be washed before prayer. Among the 80 nurses and 30 surgeons completing the question, 34 nurses (43%) and four surgeons (13%) incorrectly cited “smelling flatus/feces” as a factor that invalidates the Muslim prayer, while 47 nurses (59%) and 20 surgeons (66%) were not aware that passing flatus invalidated a Muslim’s prayer.

**Working practices in place to address Muslim needs.** Less than half (31 out of 77, 40%) of nurse respondents and two out of 36 surgeons (6%) always inquired about religious practices when counseling Muslim stoma patients before surgery, perhaps a result of the fact that eight out of 41 surgeons

---

**Table 2: Survey responses from World Council of Enterostomal Therapists members (nurses) and Association of Coloproctology of Great Britain and Ireland members (surgeons)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Enterostomal nurses</th>
<th>Surgeons</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;5 years of working as a colorectal specialist</td>
<td>69/89 (78%)</td>
<td>33/40 (83%)</td>
<td>102/129 (79%)</td>
</tr>
<tr>
<td>Islamic knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly identified the number of times Muslim pray (5)</td>
<td>67/85 (75%)</td>
<td>28/39 (72%)</td>
<td>95/124 (77%)</td>
</tr>
<tr>
<td>Correctly identified all prayer positions (bowing, prostrating, sitting, standing)</td>
<td>3/86 (3%)</td>
<td>1/41 (2%)</td>
<td>4/127 (3%)</td>
</tr>
<tr>
<td>Identified all mandatory areas that must be washed (anal region, ears, face, feet, genitalia)</td>
<td>14/80 (18%)</td>
<td>4/31 (13%)</td>
<td>18/111 (16%)</td>
</tr>
<tr>
<td>Recognized that flatus invalidates a Muslims prayer (feces on clothing, intoxication, menstruation, flatus, post-coital, urine on clothing)</td>
<td>33/80 (41%)</td>
<td>10/30 (33%)</td>
<td>43/110 (39%)</td>
</tr>
<tr>
<td>Working practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it within your job role to discuss religious practices prior to surgery? (Yes)</td>
<td>74/85 (87%)</td>
<td>33/41 (80%)</td>
<td>107/126 (85%)</td>
</tr>
<tr>
<td>Number of respondents who frequently inquire about religious practices before surgery (7 or more on a Likert scale where 0=never inquire and 10=always inquire)</td>
<td>31/77 (40%)</td>
<td>2/36 (6%)</td>
<td>33/113 (29%)</td>
</tr>
<tr>
<td>Identified that the left upper quadrant is the preferred stoma site</td>
<td>18/71 (25%)</td>
<td>1/30 (3%)</td>
<td>19/101 (19%)</td>
</tr>
<tr>
<td>Protocol available at workplace regarding religious counselling before stoma surgery (Yes)</td>
<td>8/85 (9%)</td>
<td>2/39 (5%)</td>
<td>10/124 (8%)</td>
</tr>
<tr>
<td>Advise Muslims to continue fasting (Yes)</td>
<td>16/62 (26%)</td>
<td>9/37 (24%)</td>
<td>25/99 (25%)</td>
</tr>
<tr>
<td>Imam (religious leader) should be involved in stoma counselling (Yes)</td>
<td>46/85 (54%)</td>
<td>2/41 (5%)</td>
<td>48/126 (38%)</td>
</tr>
<tr>
<td>When a Muslim patient refused a stoma, respondents inquired about religious reasons for refusal (Yes)</td>
<td>13/34 (38%)</td>
<td>3/20 (15%)</td>
<td>16/54 (30%)</td>
</tr>
</tbody>
</table>

Correct answers in parentheses. Total number of respondents vary by question owing to some questions not being answered by all respondents.

---
...and 11 out of 85 nurses (11%) were not confident discussing religious practices with Muslim patients before stoma surgery.

The ideal site for a stoma in Muslims from nurse respondents received approximately equal response, with all four areas/quadrants of the abdomen being cited; surgeons equally preferred lower quadrants.

Sixty-seven (67%) out of 85 nurses (79%) and 22 out of 39 surgeons (56%) did not think counseling protocols for Muslim patients were available in their workplace, including regions where Muslims comprised a large part of the population (ie, London).

Interestingly, 25 out of 124 (20%) of combined nurse and surgeon respondents stated they had been involved in a situation where a Muslim patient had refused a stoma, but 21 out of 34 nurses (62%) and 17 out of 20 surgeons (85%) did not inquire whether this was based on religious grounds. The authors also found it surprising that only 48 out of 126 respondents (38%) felt it appropriate to involve an Imam (religious scholar) in the counseling process.

No specific comments were left within the general comments section, although some participants stated they appreciated the study.

**Discussion**

Bowel surgery leading to the formation of a stoma is necessary and unavoidable in many circumstances, particularly when emergency surgery is indicated. A multinational, prospective, observational study involving 257 patients demonstrated a consistently negative impact after stoma formation in Muslim patients compared to non-Muslim groups. However, early faith counseling pre- and postoperatively can improve postoperative quality of life and coping in Muslims.8 The effectiveness of such an intervention depends on the colorectal specialist's awareness of Muslim's religious practices, including an understanding of how these can be disrupted after stoma surgery.

An overall poor awareness was noted among current study respondents regarding the positions of prayer; surgeons tended to assume stomas were best placed in the lower abdomen. Knowledge of the Islamic prayer positions has a direct relevance on stoma positioning; placing a stoma higher in the abdomen can prevent direct pressure on the stoma appliance during prostration or bowing.6 Stomas placed above the umbilicus also can minimize the physical hindrance caused during prayers.15 Muslims are religiously advised to sleep on their right side (a practice of the prophet Mohammed); this has prompted Muslim jurists to advocate the left upper quadrant as the ideal position for a stoma for Muslim patients.15

Ramadan is a revered month in the Islamic calendar and can pose problems for Muslims with a stoma, particularly for persons with high-output stomas who opt to fast. It is important for healthcare professionals to offer appropriate faith counseling to Muslim patients in this regard. If a Muslim is likely to cause harm to his/her health by fasting, he/she is, according to Islamic law, instructed to abstain from not eating. This information must be stressed to patients, because some may incorrectly regard themselves as cured following surgery.6 Early discussions between persons with a stoma and Islamic scholars can be an effective preventative step to avoid these problems.8

Some patients may be concerned that the presence of a stoma may render them ritually impure and preclude them from participating in congregational prayers. Some studies7,11,16 have demonstrated patients also may abandon prayers altogether. The absence of work-based protocols relating to Muslim counseling among the cohort of study respondents suggests a lack of awareness, because the majority of respondents did not feel it appropriate to initiate discussions concerning religious practices with patients. This may represent a general attitude among clinical staff or highlight a currently unmet training need. A majority of respondents chose not to ask about potential religious reasons for stoma refusal.

A majority of respondents from Western nations also were averse to involving an Imam in preoperative patient decision-making. This may reflect a poor understanding of the central role of an Imam in the lives of practicing Muslims. Observant Muslims hold Imams and their guidance in high regard, often turning to them for verdicts concerning health and well-being. An informed Imam can advise patients using fatāwās; these often are written edicts that can be accessed via websites and internet forums. Stoma-specific fatāwās have been issued by various leading Islamic scholars across the Islamic sects, offering advice and support around the practicalities of stomas and Islamic worship. These have been collated in recent work by the authors and are readily available online for patients and healthcare professionals to access.6 Hospital-based chaplains also can be approached and serve as conduits to access advice from higher Islamic authorities. The training of Islamic faith leaders and chaplains regarding the realities of stoma surgery should be directed by clinical stoma teams; this can lead to informed Islamic advice that can directly benefit Muslim patients.

Knowledge of Islamic principles can serve as a valuable tool during preoperative discussions with Muslim patients. These also may alleviate many religious concerns that can remain undisclosed among Muslim patients considering a stoma.

**Limitations**

The low response rate made it difficult to reliably delineate differences in practices between various colorectal nurse specialists and surgeons. The validation of the questionnaire was not robust and would have benefited from larger cohorts of non-Muslim and Muslims testing its reliability and sensitivity. An ideal future study would be to prospectively test the...
effectiveness of preoperative faith counseling in Muslim patients offered before stoma surgery, particularly among Muslims living in Western countries, because this remains unreported.

Conclusion

Muslim patients are particularly reluctant to consider stoma formation. The wide-reaching religious implications of a stoma on Islamic practices concerning purity, prayer, and fasting contribute heavily to this aversion. This small observational study highlights that despite a growing Muslim demographic in many Western nations, awareness of the Islamic implications of stomas and translation of this knowledge into working practices may be suboptimal among colorectal specialist workers.

Departmental protocols that guide professionals on how to offer appropriate religious counseling for such patients may be useful tools. Involvement of an Imam/Muslim hospital chaplain in preoperative counseling to advise patients who refuse surgery on religious grounds may have a positive impact on health behaviors. Working in collaboration with local Muslim communities and obtaining Islamic rulings (fatwas) from experts in Islamic jurisprudence may facilitate positive experiences of Muslims following stoma surgery and improve quality of life postoperatively.

References