



Original Article

Patients Knowledge on Infection Control Precaution

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ARTICLE INFO

ABSTRACT

Article history Received: January 02, 2019 Accepted: March 20, 2019 Published: April 30, 2019 Volume: 7 Issue: 2

Conflicts of interest: None Funding: None

Key words: Infected Patients, Patients' Knowledge, Infection Control Background: Hospital-associated infections are related with mortality, extended hospital stay, morbidity and attributable costs to the health care sector. The main objective of this study is measuring infected patients' knowledge on infection control precaution in University Malaya Medical Center. Methods: Survey of 184 infected patients admitted to University Malava Medical Center (UMMC) in Malaysia determined infected patients' knowledge level regarding infections control activities. Results: Infected patient's knowledge on infection control precaution in given medical center (UMMC) is moderately high with 65.2% good knowledge among infectious patients. Nevertheless, certain knowledge areas of infection control need to improve -i.e., transferring infected patients to isolation room immediately and using facemasks by medical staff while attending patients. The age, level of education of patients and the source of receiving information regarding to controlling infection cannot influence infected patient's knowledge of infection Control. While the gender of patients, patients' job experience in healthcare environment, relatives of patients' job experience in healthcare environment, frequency of hospitals admission and the received information related to controlling infection can influence infected patient's knowledge of infection Control. Conclusions: Actions intended at improving knowledge are essential to the implementation and development of efficient public health preventative strategies.

INTRODUCTION

Early diagnosis and handling of infectious cases have been considered the most effectual control approaches to decrease disease transmission (Gonzalez-Angulo et al., 2013), so one of the most critical issues in the health care environment specifically is the observation of infection among patients (Steinhauser et al., 2000). Hospital acquired infections commonly are diagnosed in patients within 24-48 hours after admission to hospital. On the other hand, hospital acquired infections are described as infections from the admission which patients are suffering. Based on the Health Protection Agency Report (2007) healthcare associated infections are considered as the main concerns for threatening patients' life since they are dangerous and are sometimes fatal (Wichaikull, 2011). Since, infection is a major worldwide problem thus, finding a rational and practical solution to control infection is the worldwide goal regardless of country level of development.

In such circumstances, the roles of medical staffs are highlighted in the prevention of infections. Several duties must be applied by medical staff to control infections such as wearing masks and gloves or hand washings. Whereas, the role of patients has not been highlighted in the process of infection control (Pratt et al., 2007). Moreover, in recent years several studies have been conducted to investigate how patients are able in helping infection control (Gould, 2012, Sacar et al., 2006, Patarakul et al., 2005, Merle et al., 2005, Madeo et al., 2008, Waine et al., 2007, Al-Damouk et al., 2004, Fleming and Randle, 2006, Liu et al., 2011, Abbate et al., 2008). These studies highlighted that if patients have knowledge about infection control procedures, they will be able to help medical staff in the process of infection control efficiently. Therefore, based on the important role of patients, the level of their knowledge is critical factors in equipping them to avoid being infected while they are hospitalized, or to minimize the level of infection in the wards that they are hospitalized (Saiman and Siegel, 2003). The present study aims to evaluate infected patients' knowledge level on infection control and to shed more lights in the relationship between patients' knowledge and patients' demographics characteristics.

METHODS

The target population for this cross-sectional survey, carried out to evaluate the infected patient's knowledge of infection control in University Malaya Medical Center (UMMC) in

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Malaysia. This research content has already been sent to the ethical committee of the University Malaya Medical Centre for approval letter with this ID number; 201310-0368. The ethical committee of UMMC has approved of this study on 22 November 2013.

In this research, 200 questionnaires were distributed among infected patients who were admitted in WP1 and WP2 wards. Around 184 of those questionnaires were returned. The number of samples to be selected was decided according to Creative Research Systems and Raosoft that are survey system companies who offer calculations that decide the sample size for research studies.

The questionnaire includes two sections and is developed according to previous studies as well as standard and universal infection control precautions. Section one, includes 8 demographic questions, such as gender, age, educational level, their own job experience in the health care environment, family job experience in the health care environment, times admitted in the hospitals, receiving information regarding infection control and the source information. Questions in Section A are measured using nominal and ordinal scales. Section B of the questionnaire comprises 15 questions regarding the familiarity of infected patients with infection control activities in the hospitals. These statements are determined using 1 -yes, 0 - no (Appendix A). There were total of 15 points in the questionnaire. Participant who scored 11 points and above was categorized as having good knowledge and knowledge score 10 and below considered as poor knowledge. In addition, the questionnaire was translated to Bahasa Malay from English via back-translation method.

Descriptive and inferential statistics methods were performed. Participation's gender, age, the level of education, the job experience in health environment, the job experience of their relatives in health environment and receiving information regarding to infection control and the sources of these information were collected. The other private information, e.g. name was not collected to make sure the privacy of participants and the complementary the results. Even, participants were able to contact the researcher if they were interested to know the outcomes of the research. The mean score of patients' perception on 15 questions was used to indicate the level of patients' knowledge on infection control precaution among infectious patients were admitted in UMMC. To identify, the area of weakness of infection knowledge among patients, it was applied the description for each item of the section B of questionnaire in SPSS 22.0.

For discovering the relationship between independent variables (age, gender, the level of education, job experience in health care environment, relative's job experience in health care environment, frequency of hospital admission, the received information regarding the infection control, the way of obtaining the infection control information) and dependent variable (Patient's knowledge of infection control) was applied chi-square test in SPSS 22.0.

RESULTS

Of the 200 distributed surveys to participate in the study, 184 surveys returned to be researcher with an overall response

rate of 92%. The distribution of relevant socio-demographic characteristics and selected information on hospital admissions and examinations of participants are summarized in Table 1. Overall, 27% of the patients participated were women, the average age was 36.86 years (range 18-62), and more than two-third had some secondary or higher level of education. Just 6.5% of the participants had job experience in health environment. However, 26.6% of the participants had families that were working in the healthcare environment. More than half of them (60.3%) were the first time they were admitted in the hospital. 87% of the participants previously received the information regarding the infection control, furthermore 20% of these informed participants received the mentioned information via medical staff and 54% of them received the information from mass media such as TV, radio, magazine, newspapers and other sources.

Table 2 shows the mean score of patients' perception on 15 questions that were used to identify the level of patients' knowledge on infection control precaution among infectious

Table 1. Socio-demographic characteristics and selected information on hospital admission and examinations of the study population

| Variables | n(%) | Mean±SD |
|--|-------------|--------------|
| Age | | 36.85±14.162 |
| Gender | | |
| Male | 135 (73) | |
| Female | 49 (27) | |
| Education level | | |
| Primary | 25 (13.6) | |
| Secondary | 110 (59.8) | |
| Tertiary | 49 (26.6) | |
| Job experience in health environment | | |
| Yes | 12 (6.5) | |
| No | 172 (93.5) | |
| Relatives 'Job experience in health environment | | |
| Yes | 49 (26.6) | |
| No | 135 (73.4%) | |
| Times admitted in the hospitals | | |
| First time | 111 (60.3) | |
| 2-5 times | 37 (20.1) | |
| >5 times | 36 (19.6) | |
| Received information regarding infection control | | |
| Yes | 160 (87) | |
| No | 24 (13) | |
| Obtaining information about infection control | | |
| Medical Staff | 36 (20) | |
| Mass Media | 99 (54) | |
| Others | 49 (26) | |

| Table 2. Patient's knowledge of infection control | | | | | |
|---|-----|---------|---------|-------|----------------|
| | Ν | Minimum | Maximum | Mean | Std. deviation |
| Patient's knowledge of infection control | 184 | 3.00 | 15.00 | 10.57 | 3.47 |

patients were admitted in UMMC. Each item has two categories responses Yes and No. Questions 1 to 15 measure patients' knowledge on infection control. Based on the scoring of questionnaire; total score of knowledge among patients is ranged from three to 15. The descriptive analysis of the current study demonstrates that the mean score of patient's knowledge of infection control is 10.57. All items in the questionnaire were assigned a value of one (1) for correct answers and zero (0) for incorrect answers. Cut-off points for knowledge was 10 and for indication patients' knowledge the total scores were grouped into categories includes Good knowledge 11 to 15 mean scores and Poor knowledge 0 to 10 means.

Table 3 displays the results of the mean score of patients' knowledge. Range of questionnaire scoring, frequency, percentage, standards deviation, and mean were used to provide the basic information on the character of each variable. For measuring the level of patients' knowledge, the total mean score was 10.57 (SD = 3.47, score range, 3 - 15), which suggest more than half of participates reported high level of knowledge in relation to infection control precaution.

To identify, the area of weakness in relation to patients' description for each item of the questionnaire in SPSS 22.0 was applied. Some area of knowledge needs to improve based on lower percentage in comparison with other questions. These mentioned areas consist of, transferring infected patients to isolation room immediately and using face masks by medical staff (doctors and nurses) while attending patients.

To discover the relationship between independent variables (age, gender, the level of education, job experience in health care environment, relative's job experience in health care environment, times admitted in the hospitals, the received information regarding the infection control, the way of obtaining the infection control information) and dependent variable (Patient's knowledge of infection control) chisquare test in SPSS 22.0 was applied. The results showed that participants who are below 32 years have highest percentage (32.1%) of good knowledge and those participants aged 47 years and above have lowest percentage on good knowledge category (15.8%). As it is illustrated in the Table 4, P = 0.318. This showed that there is not a statistically significant association between age and patient's knowledge of infection control. That means patients with different range of age do not have different knowledge of infection control. In other words, when the age is higher the patient's knowledge of infection control is not more.

The descriptive result shows that male have high percentage (42.9%) of good knowledge in total. However, most female participants in this study show good knowledge (83.7% within the gender). As it is illustrated in the Table 4, P = 0.002. This showed that there is a statistically significant association between gender and patient's knowledge of infection control. That means the knowledge of infection con**Table 3.** Patients' score on knowledge as good or poor (n=184)

| Knowledge | Frequency | Percentage |
|-----------------|-----------|------------|
| Total score | | |
| #Good knowledge | 120 | 65.2 |
| #Poor knowledge | 64 | 34.8 |
| #Good knowledge | (11-15) | (0-10) |
| #Poor knowledge | | |

trol is different in males and female patients.

Participants with secondary level of education have high percentage of good knowledge (39.1%) and participants with primary level of education indicate lower percentage of good knowledge (10.3%). As it is demonstrated in the Table 4, P = 0.355. This showed that there is no statistically significant association between the level of education and patient's knowledge of infection control. That means patients with different level of education do not have different knowledge of infection control. In other words, in this study when the level of education is higher the patient's knowledge of infection control is not more.

In the total, participants who have not worked in healthcare setting show higher parentage of good knowledge (65.2%). However, all 12 participants who had job experience in healthcare environment have good knowledge (6.5%). As it is demonstrated in the Table 4, P = 0.000. This showed that there is a statistically significant association between job experience in health care environment and patient's knowledge of infection control. That means patients who work in health care environment and patients who do not work in health environment have different knowledge of infection control. In other words, when the patients have job experience in health care environment their knowledge of infection control is more.

Participants' whose relatives do not work in healthcare setting show the higher percentage of good knowledge (42.4%). On the other hand, just 3.8% of patients whose relatives worked in healthcare had poor knowledge. As it is demonstrated in the Table 4, P = 0.000. This showed that there is statistically significant association between relative's job experience in health care environment and patient's knowledge of infection control. That means, patients whose relatives work in health care environment and patients whose relatives do not work in health environment do not have equal knowledge of infection control.

Patients who admitted for the first time at hospital had high percentage of good knowledge (44%). On the other hand, participants with frequently admission had minor percentage of poor knowledge (9.2%). As it is illustrated in the Table 4, P = 0.024. This showed that there is a statistically significant as-

| Factors | Knowled | Chi-square (1)p | |
|-------------------------|----------------------|---------------------|-------|
| | Poor knowledge N (%) | Good knowledge N(%) | |
| Age | | | |
| 16-32 | 24 (13) | 59 (32.1) | 0.318 |
| 33-46 | 21 (11.4) | 32 (17.4) | |
| 47-62 | 19 (10.3) | 29 (15.8) | |
| Gender | | | |
| Male | 56 (30.4) | 79 (42.9) | 0.002 |
| Female | 8 (4.3) | 41 (22.3) | |
| Level of education | | | |
| Primary | 6 (3.3) | 19 (10.3) | 0.355 |
| Secondary | 38 (20.7) | 72 (39.1) | |
| Tertiary | 20 (10.9) | 29 (15.8) | |
| Job experience | | | |
| Yes | 0 (00.0) | 12 (6.5) | 0.000 |
| No | 52 (28.3) | 120 (65.2) | |
| Relative job experience | | | |
| Yes | 7 (3.8) | 42 (22.8) | 0.000 |
| No | 57 (31) | 78 (42.4) | |
| Admmision to hospital | | | |
| First time | 30 (16.3) | 81 (44) | 0.024 |
| 2-5 times | 17 (9.25) | 20 (10.9) | |
| >5 times | 17 (9.2) | 19 (10.3) | |
| Received information | | | |
| Yes | 61 (33.2) | 99 (53.8) | 0.014 |
| No | 3 (1.6) | 21 (11.4) | |
| Ways obtain information | | | |
| Medical Staff | 7 (3.8) | 29 (15.8) | 0.093 |
| Mass Media | 39 (21.2) | 60 (32.6) | |
| Other | 18 (9.8) | 31 (16.8) | |

| Table. 4 Chi-Square Tests between Demographic variables and Patient's knowledge of infection con |
|---|
|---|

Significance at P < 0.0

sociation between times the patients admitted in the hospitals and patient's knowledge of infection control. That means, the knowledge of infection control is different between patients who admitted more in the hospital and the patients who do not.

Patients who had previously received information regarding to infection control show higher percentage of good knowledge (53.8%) in compare with others (11.4%). As it is demonstrated in the Table 4, P = 0.014. This showed that there is a statistically significant association between the received information regarding the infection control and patient's knowledge of infection control. That means, patients who the received information regarding the infection controls and patients who do not the received information regarding the infection control have different knowledge of infection control. In other words, when the patients the received the information regarding the infection controls their knowledge of infection control is more.

Patients who received information via mass media have high percentage of good knowledge (32.6%) and participants who obtained information via medical staff have lower percentage of good knowledge (15.8). As it is illustrated in the Table 4, P = 0.093. This showed that there is no statistically significant association between the way of obtaining the infection control information and patient's knowledge of infection control. That means, the knowledge of infection control is not different between patients based on the source of receiving the information.

DISCUSSION

According the authors' knowledge, this is the first published survey that shows an infected patients' knowledge on infections control precaution in Malaysia. So, findings of this study revealed restricted fundamental knowledge about this issue in University Malaya Medical Centre. Despite the innovation and significance level of these findings, some methodological contemplation ought to be emphasized when interpreting the results. First, all variables applied in

this analysis were gathered using patients' self-reports and the possibility exists that patients responses will give answers aimed to satisfy the interviewer rather than reflecting their truth knowledge toward infection control. However, it has been shown that means of recovering the validity of self-report data comprise the declaration of privacy and establishment of good relationship. In the current study, at the beginning of the questioner it was stated that all of the information would be kept private and the names and other confidential information of the patients were not required, to convince them that their private information in the surveys would not be disclosed. Second, since the present study was cross-sectional in design, there was no temporal division of the explanatory variables from the results, so that it was not probable to differentiate whether those variables preceded the result or vice versa. Third, the most limitation in the current study is sampling, which comprises a very limited population thus; external validity (generalizability) is limited and may not be generalized to other patients at other hospitals. Despite the probable limitations, there were some advantages of the current study. First, by identifying the moderately high level of infected patient's knowledge, we can conclude the current infection control strategies and hospital's educational program for patients is reasonably acceptable as well as successful. Most patients were sure about their knowledge of hospital-associated infections, and most have a good knowledge toward infections control precaution, although it was also quite remarkable that there are some areas of knowledge toward infections control that need to improve includes transferring infected patients to isolation room immediately and using face masks by medical staff while attending patients. Second, recognizing the area of weakness related to patients' knowledge could assist managers and policy makers to provide some types of activities and plans in order to increase the patients' knowledge in these specific areas. Third, by making noticeable the main influential factors for patient's knowledge in relation to infection control precaution, health care managers can provide the best planning and implication regarding to this issue.

The respondents to the questionnaire of the present study showed similar levels of knowledge when compared with those reported in a previous survey conducted in Germany, as 66.9% of the patients that declared to know about nosocomial infections and have a good knowledge toward hospital infections control (Mattner et al., 2006). A lower value has been observed in Italy and France, as among the 65 surgical patients, only 26.2% were capable to explain a nosocomial infection (Merle et al., 2005, Abbate et al., 2008). The result of this survey also is contrast with Waine et al.(2007) who showed adult patients have poor knowledge of infection control and the consequence of not paying enough attention to infection control activities.

In fact, it is notable that in the present study the main source of information through which knowledge was achieved was the media and not by experienced health care representatives. It is believed that although media operations may have a positive influence, they emerge to have restricted impact on lasting behavioral changes, in this manner requiring the performance of policy and educational strategies. These results propose that it is essential for infection control experts to publish information to patients in the background of routine medical care.

With regard to relationship between the demographic variables of patients and their knowledge toward infections control precaution expressed during the present survey, age, the level of education and the sources of information cannot affect the patient's knowledge of infection control. While gender, job experience in a healthcare environment, the job experience of patients' relatives in a healthcare environment, the times admitted in the hospitals and the received information regarding the infection control among infectious patients can affect the infected patient's knowledge of infection control.

CONCLUSION

In conclusion, the findings showed more than half of the participants have good knowledge on infection control. The infection control strategies and hospital's educational program for patients at University Malaya Medical Center are reasonably applicable.

However, the results of the study point out significant opportunities for improving focused staff's training programs about the importance of patients' education, which can considerably increase patient safety attributed to hospital-acquired infections and lead to reduction in cost. This type of teaching program for patients to prevention and control of the spread of infection require coordination and intensive effort from various departments of the hospital to promote patients' education about infection control precaution. Nevertheless, future studies are necessary to examine patients' knowledge as well as promotion patients' awareness. More researchers are needed to address whether or not improved patients' knowledge is linked with lower risk of infection. Additionally, future studies are needed to investigate that patients' awareness regarding to infection control can affect significantly on their prognosis.

REFERENCES

- Abbate, R., G. Di Giuseppe, et al. (2008). "Patients' knowledge, attitudes, and behavior toward hospital-associated infections in Italy." *American journal of infection control* 36(1): 39-47.
- Al-Damouk, M., E. Pudney, et al. (2004). "Hand hygiene and aseptic technique in the emergency department." *Journal of Hospital Infection* 56(2): 137-141
- Fleming, K. and J. Randle (2006). "Toys--friend or foe? A study of infection risk in a paediatric intensive care unit." *Paediatric nursing* 18(4): 14-18.
- Gonzalez-Angulo, Y., H. Geldenhuys, et al. (2013). "Knowledge and acceptability of patient-specific infection control measures for pulmonary tuberculosis." *American journal of infection control.*
- 5. Gould, D. (2012). "Diagnosis, prevention and treatment of fungal infections." *Primary Health Care* 22(6): 32-39.
- 6. Liu, C., A. Bayer, et al. (2011). "Clinical practice guidelines by the Infectious Diseases Society of America for

the treatment of methicillin-resistant Staphylococcus aureus infections in adults and children." *Clinical Infectious Diseases* 52(3): e18-e55.

- Mattner, F., Mattner, C., Zhang, I., & Gastmeier, P. (2006). Knowledge of nosocomial infections and multiresistant bacteria in the general population: results of a street interview. *Journal of Hospital Infection*, 62(4), 524-525.
- 8. Merle, V., V. Van Rossem, et al. (2005). "Knowledge and opinions of surgical patients regarding nosocomial infections." *Journal of Hospital Infection* 60(2): 169-171.
- Patarakul, K., A. Tan-Khum, et al. (2005). "Cross-sectional survey of hand-hygiene compliance and attitudes of health care workers and visitors in the intensive care units at King Chulalongkorn Memorial Hospital." Journal of the Medical Association of Thailand= Chotmaihet thangphaet 88: S287.
- Pittet, D., B. Allegranzi, et al. (2008). "Infection control as a major World Health Organization priority for developing countries." *Journal of Hospital Infection* 68(4): 285-292.

- Pratt, R. J., C. M. Pellowe, et al. (2007). "epic2: National evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England." *Journal of Hospital Infection* 65: S1-S59.
- 12. Sacar, S., H. Turgut, et al. (2006). "Poor hospital infection control practice in hand hygiene, glove utilization, and usage of tourniquets." *American journal of infection control* 34(9): 606-609.
- Saiman, L. and J. Siegel (2003). "Infection control recommendations for patients with cystic fibrosis: microbiology, important pathogens, and infection control practices to prevent patient-to-patient transmission." *Infection Control and Hospital Epidemiology* 24(S5): S6-S52.
- Steinhauser, K. E., N. A. Christakis, et al. (2000). "Factors considered important at the end of life by patients, family, physicians, and other care providers." *JAMA: the journal of the American Medical Association* 284(19): 2476-2482.
- 15. Wichaikull, S. (2011). "A comparison of the factors which influence infection control in paediatric wards in England and Thailand."

APPENDIX A



CONFIDENTIAL

DEPARTMENT OF NURSING SCIENCE FACULTY OF MEDICINE, UNIVERSITY OF MALAYA

Dear participant

My name is Felor Javadi Bashar, final year student of Masters of Nursing Science in University Malaya. I am required to conduct a nursing research project to fulfill the requirement for the above course.

The research is regarding *patients' knowledge on infection control at the hospital environments*. Your participation will determine the accuracy and most importantly contribute to the success of the project. Please answer all question based on your honest opinion. There is no right or wrong answer.

The information provided is confidentiality assured. No name is required in this questionnaire. All participants will be kept anonymous. Returning of the completed questionnaire indicate your consent to take part in this study.

Your cooperation is very much appreciated.

Thank you very much.

Yours sincerely, Felor Javadi Bashar Student Master of Nursing Science University of Malaya Contact No: 0166406564 Email: felor javadi@yahoo.com



SULIT

JABATAN KEJURURAWATAN FAKULTI PERUBATAN, UNIVERSITI MALAYA

Responden yang dihormati,

Nama saya adalah Felor Javadi Bashar, pelajar tahun akhir Sarjana Sains Kejururawatan di Universiti Malaya. Saya dikehendaki menjalankan satu kajian kejururawatan sebagai sebahagian keperluan kursus di atas.

Kajian yang dijalankan adalah berkaitan dengan pengetahuan pesakit berkaitan dengan kawalan jangkitan/infeksi di persekitaran hospital. Penglibatan dan maklumat yang anda berikan mengesahkan ketepatan dan menyumbang kepada kejayaaan kajian ini. Sila jawab semua soalan berdasarkan pendapat anda dengan jujurnya. Tiada jawapan yang betul atau salah.

Segala maklumat yang diberikan adalah sulit. Nama responden tidak perlu diberikan dalam borang soal selidik ini. Maklumat diri anda akan dirahsiakan. Dengan mengembalikan borang soalan selidik yang lengkap menunjukkan kebenaran anda untuk mengambil bahagian dalam kajian ini.

Kerjasama anda sangat dihargai Sekian terima kasih.

Yang benar, Felor Javadi Bashar Pelajar Sarjana Sains Kejururawatan Universiti Malaya No H/p:0166406564 Email: felor javadi@yahoo.com

RESPONDENTS CODE:



DEPARTMENT OF NURSING SCIENCE FACULTY OF MEDICINE UNIVERSITY OF MALAYA

QUESTIONNAIRE/SOAL SELIDIK

RESEARCH TITLE: PATIENTS' KNOWLEDGE ON INFECTION CONTROL PRECAUTION

TAJUK KAJIAN: PENGETAHUAN PESAKIT BERKAITAN DENGAN LANGKAH BERJAGA –JAGA KAWALAN JANGKITAN/INFEKSI

Statement/Pernyataan

The questionnaire comprises of two sections: A, B Borang soal selidik ini mengandungi dua seksyen: A, B

Instruction/Arahan

Please answer all the questions as in the next page: Section A consists of 8 items related to personal data. Section B consists of 15 items related to knowledge. Please fill in the space provided and tick in the boxes provided. Sila jawab semua soalan di mukasurat belakang: Seksyen A mengandungi 8 pernyataan berkaitan dengan maklumat peribadi. Seksyen B mengandungi 15 pernyataan berkaitan dengan pengetahuan. Sila isikan ruang kosong dan tandakan i di kotak yang disediakan.

Section A: Personal Data

Seksyen A: Maklumat Peribadi

Please answer all questions by filling in the space and tick in the provided box. Sila jawab semua soalan dengan mengisi ruang kosong dan tandakan i dikotak yang disediakan.

- 1. Age/Umur: _____ years/tahun
- 2. Gender/Jantina:

Male / Lelaki Female / Perempuan 3. Education Level/Tahap Pendidikan:

| Primary / Rendah |
|----------------------|
| Secondary / Menengah |
| Tertiary / Ijazah |

4. Have you worked in hospital/clinic? *Pernahkah anda bekerja di hospital/klinik?*

| No / Tidak |
|------------|
| Yes / Ya |

5. Have any of your family members worked in hospital/clinic? *Pernahkah mana-mana ahli keluarga anda bekerja di hospital/klinik?*

No / Tidak Yes / Ya

6. How many times have you been admitted in the hospitals? *Berapa kali anda pernah dimasukkan ke dalam hospital?*

| First time / kali pertama |
|---------------------------|
| 2-5 times / kali |
| >5 times / kali |

7. Have you ever received information regarding the infection control? *Pernahkah anda menerima maklumat mengenai kawalan jangkitan/infeksi?*

No / Tidak Yes / Ya

8. If yes, how did you obtained this information? *Jika ya, bagaimana anda mendapat maklumat ini*?

Medical staff/ Kakitanpan Perubatan Mass media (TV, radio, magazine, newspaper) Media massa (Tv, Radio, majalah, surat khabar) Others/Lain-lain

Section B: Knowledge on Infection Control

Seksyen B: Pengetahuan Berkaitan dengan Kawalan Jangkitan/Infeksi

In this section, questions are related to your knowledge regarding infection control activities in the hospitals. There is no right and wrong answer.

Please read and answer all questions. Tick ($\sqrt{}$) in the box provided for each statement.

Dalam seksyen ini, soalan adalah berkaitan dengan pengetahuan anda dalam aktiviti kawalan jangkitan/infeksi di hospital. Tiada jawapan yang betul dan salah.

Sila baca dan jawab semua soalan. Tandakan ($\sqrt{}$) di dalam kotak yang disediakan untuk setiap pernyataan.

| Kno Pens | wledge on Infection Control getahuan Berkaitan dengan Kawalan Jangkitan/Infeksi | Yes/ Ya | No/ Tidak |
|-------------|---|------------|--------------|
| 1 | Hospital acquired infection can be prevented | | |
| | Jangkitan yang diperolehi dari hospital boleh di cegah | | |
| 2 | Medical staff (doctors and nurses) can infect patients. | | |
| | Kakitangan perubatan (doktor dan jururawat) boleh menjangkiti pesakit | | |
| 3 | Hospitals must provide a training course or brochures on infection control for patients Hospital mesti menyediakan kursus latihan atau risalah mengenai kawalan jangkitan/infeksi untuk pesakit | | |
| 4 | Suspected patients in terms of infection must not be separated from the other patients <i>Pesakit yang disyaki dijangkiti seharusnya tidak diasingkan daripada pesakit lain</i> | | |
| 5 | Infected patients must be transferred to isolation room immediately Pesakit yang dijangkiti mesti dipindahkan ke bilik pengasingan dengan segera | | |
| 6 | Medical equipment should be single used or individualized | | |
| | Peralatan perubatan seharusnya diguna sekali sahaja atau secara individual | | |
| 7 | Medical staff (doctors and nurses) should not use facemask while attending patients Kakitangan perubatan (doktor dan jururawat) seharusnya tidak menggunakan topeng muka semasa merawat pesakit | | |
| 8 | Medical staff (doctors and nurses) should cover their mouth when coughing <i>Kakitangan perubatan (doktor dan jururawat) mesti menutup mulut mereka ketika batuk</i> | | |
| 9 | Hand washing before and after patient contact/touch must be applied by medical staff (doctors and nurses) Membasuh tangan sebelum dan selepas merawat/menyentuh pesakit mesti diamalkan oleh kakitan- gan perubatan (doktor dan jururawat) | | |
| 10 | Wearing gloves for infected patient contact/touch must be applied by medical staff (doctors and nurses) Pemakaian sarung tangan untuk merawat/menyentuh pesakit yang dijangkiti mesti diamalkan oleh kakitangan perubatan (doktor dan jururawat) | | |
| 11 | Wearing gown/aprons must be applied by medical staff while attending infected patients. Pemakaian baju/apron mesti diamalkan oleh kakitangan perubatan semasa merawat yang dijangkiti pesakit | | |
| 12 | Soiled, wet or blood stained linen and clothes must be changed as soon as possible. Kainan dan baju yang telah tercemar, basah atau terkena darah mesti ditukar dengan secepat mungkin | | |
| 13 | Do you feel that it is not important to receive information about infection control precaution from medical staff? Adakah anda merasa bahawa tidak penting untuk menerima maklumat berkaitan dangan langkah berjaga-jaga kawalan jangkitan/infeksi daripada kakitangan perubatan | | |
| 14 | Use of facemask by family members and visitors is not necessary when visit patients <i>Pemakaian topeng muka oleh ahli keluarga dan pelawat adalah tidak perlu semasa melawat pesakit.</i> | | |
| 15 | Hand washing before and after patient contact should apply by family members and visitors when visit patients Membasuh tangan sebelum dan selepas menyentuh pesakit mesti diamalkan oleh ahli keluarga dan pelawat semasa melawat pesakit | | |