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ORIGINAL ARTICLE

A STUDY TO ASSESS THE EFFECTIVENESS OF INFECTION CONTROL COMMITTEE IN THE PUSHPAGIRI MEDICAL COLLEGE HOSPITAL, TIRUVALLA

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Pushpam.J. Chundamalai*[1], Siby Thomas [2]

Authors:

[2]Professor and HOD, Department of Hospital Administration, Division of Health Management, School of Medical Education, Centre for Professional and Advanced studies, Gandhinagar P.O., Kottayam, Kerala, India

Corresponding Author:

*[1]Assistant Professor, Department of hospital administration, Division of health management, School of Medical Education, Centre for Professional and Advanced studies, Gandhinagar P.O., Kottayam, Kerala, India. Mail Id: pjnasha55@gmail.com

ABSTRACT

Background of the study: American Medical Association first recommended in 1958 that hospital set up Infection Control Committee. Though not widely accepted with modification of original policy in 1976, Infection Control Committee functions effectively to reduce the spread of infectious diseases. Infection control reduces mortality and morbidity due to nosocomial infection. It helps to maintain employee health and morale. Objectives of Study was to analyse the effectiveness of Infection Control Committee of Pushpa Giri Medical College Hospital Tiruvalla and also to study the function and importance and functions of hospital infection control committee. **Methodology:** The study was conducted at Pushpa Giri Medical College Hospital Tiruvalla. The population selected was 2 set of populations which consist of all Infection control committee members and all ward in charge Pushpa Giri Medical College Hospital Tiruvalla as sample. A pre tested questionnaire was used to collect the data and distributed among 15 hospital infection control committee members and 35 wards in charge. The period of study was 45 days from 6-5-2019 to 28-6-2019. The filled in questionnaires were collected, classified and analysed. **Results:** The study revealed that the infection control committee is effective. It is vital in rendering service to the patients. The infection control committee functions efficiently and follows the international guidelines. **Conclusion:** The observations revealed that the policies and procedures of this hospital is based on CDC and WHO guidelines. There are too many factors influencing the effectives functioning of Hospital Infection Control Committee.

Keywords: Infection Control Committee; Infectious diseases; Nosocomial infection

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INTRODUCTION

Health care associated infections (HAI) are the infection that people acquire while they are receiving treatment for disease condition in health care settings. HAI can occur anywhere health care is delivered[1]. HAIs are the leading cause of death in USA. At any given time about one in every 20 hospitals acquired. The scope of study regarding area of HICC is to improve health care quality[2]. This committee decided to take a phased approach when developing all action plan to prevent HAIs and patient safety WHO called HAI a major cause of death and disability for patient[3].

The risk of health care associated infection in developing countries is 2-20% higher than in developed countries as HAI added to functional disability and emotional stress of patient. The cost of nosocomial infection in terms of both money and human sufferings prolonged cost, not only increase direct cost to patient and indirect cost due to cost works[4,5]. So, the need in developing an infection controls programme and efficient infection control committee is important in health care[6].

Hospital acquired infection: It is defined as infections acquired by the persons in the hospitals, manifestations of which may occur during hospitalization or after discharge from the hospital. Person may be a patient, staff or visitor[7,8].

Hospital Infection Control Committee: The infection control team (ICT) should include a doctor and a nurse for the facility with 150 beds (or less). In facilities with more than 150 beds, the team should be formed of a doctor and a minimum of a nurse[9,10]. All members of the team should be full-time employees dedicated to infection control activities[11]. Some Nurses, called "link nurse" or "representatives" affiliated with various departments should be assigned to the infection control teams. An average of one infection control nurse a should be assigned for functional 150 to 200 beds.[12,13] Infection control team should be established in each healthcare facility that has more than 30 beds[14].

HICC Members: Medical superintendent, Infection control doctor, O T In charge, HOD Medicine, Surgery, Pediatrics, and Pathology, HOD, Anesthesia, Nursing superintendent, Infection control nurse, Quality manager, A microbiologist, responsible for the infection surveillance team (IST), Housekeeping in – charge, CSSD in – charge, Dietician[15,16].

Infection Control Committee functions: Here the committee to minimize the risk of infection to patients, staff and visitors. To identify the roles and responsibilities of key personnel involved in the prevention and control of infection.[17,18] To maintain surveillance over hospital acquired infections, to develop a system for identifying, reporting, Analyzing, investigating, and controlling hospital acquired infections[19,20,21].

Also to develop and implement preventive and corrective programs in specific situation where infection hazard exist,[22] To develop guidelines for proper use of antibiotics also recommend remedial measures when antibiotic resistant strains are detected,[23] To review and update hospital infection control manual from time to time,[24] To provide employee health education regarding matters related to hospital acquired infections,[25] Submit all activity reports and statistical data to the committee, The infection control committee meets every 3 months and the meeting agenda shall be circulated to committee members before the meeting.

METHODOLOGY

Objectives of Study were to analyse the effectiveness of Infection Control Committee of Pushpagiri Medical College Hospital Tiruvalla and also to study the function and importance and functions of hospital infection control committee The design of the study is hospital-based study. It is an opinion survey method with the help of questionnaire. In this research design primary and secondary data were collected from Pushpagiri Medical College hospital under quality assurance department. The purpose of this retrospective study is to assess the infection control practices among Infection Control Committee of Pushpagiri Medical College Hospital, Tiruvalla by analysis of questionnaire.

Inclusion criteria: All members of infection control committee and Ward in charge

Exclusion criteria: Staff nurses, paramedical staff and administrative staff are not included except those in the Hospital Infection Control Committee.

Research settings and source of data: This study carried out in Pushpagiri Medical College Hospital, Tiruvalla. The study was conducted for a period of 45 days from 06-05-2019 to 28-06-2019.The data was originally collected by the process of interview, questionnaire, observation and records of quality assurance department and HIC department.

Before conducting the study, permission was obtained from Ethical Committee of this Hospital. A written consent was obtained from all respondents.

Sample design: A non-probability sampling was used in the study. A total of 50 participants involved in the study including all hospital infection control committee members (15) and 30 Ward in charge were selected and given questionnaires. Infection control committee members and all ward in charges were included in the study. So, it was a censes study.

Pilot Study: Before the main research, a small-scale initial study was conducted. It was conducted among 5 respondents from both groups. It was done to check the feasibility or to improve the design of the research.

Validation and standardization: Content validity was obtained by experts in quality assurance and infection control committee. The academic experts also had given valuable opinion. The content regarding the total layout and format relevance and accuracy and survey pattern were taken into consideration. Reliability of tool was tested. The responses were recorded and analyzed using the statistical measures. Analyze the data in terms of awareness and performance and compare with the standards. Methods developed to obtain reliable result with standard guideline and protocols.

Tools and Techniques: A structured questionnaire was prepared based on the study to assess the awareness infection control practices among Infection Control Committee of Pushpagiri Medical College Hospital, Tiruvalla. The final questionnaire comprises item related to awareness, effective functions, infection and importance of control committee. In this study the researcher selected two sets of population consist of all infection control committee members and all ward in-charge (Link nurses) of Pushpagiri Medical College Hospital Tiruvalla.

The questions are divided into 2 parts. First part is related to demographic information of

participant i.e., age, gender, level of education, and working experience.

Second part is divided in to two based on the following aspects. Infection Control Committee, infection control manual, importance and functions of HICC, protective measures of hand wash methods, polices, knowledge and awareness. Precaution measures of transmission from hospital environment including waste management and practice in nosocomial infection control measures.

Data collection: A pre-tested structured self-administrated questionnaire and direct observation was used to collect data. The tool for collection of data is adopted by reviewing relevant literatures, journals and records. The tool, questionnaire was prepared in English. The study was conducted for 45 days from 6-5-2019 to 28-6-2019. In addition to improve the validity of question, the tool was checked by two experts in the field of quality assurance and infection control department. Based on the comment and suggestion of expert's corrections were made in the questionnaire before data collection. Questionnaire was distributed during the study period.

Limitation of study: Due to confidential nature of the records some data are not disclosed by the hospital (data regarding the rate of hospital acquired infection)

Analysis And Interpretation: The collected data are analyzed to assess the effectiveness of hospital infection control committee of Pushpagiri Medical College Hospital Tiruvalla. The data are analysed using percentages analysis. Out of the total 70 questions eight demographic data were not considered for analysis. The responses of the remaining questions were analysed. The data were concerned about infection control programmes, polices, procedures, training and surveillance activities. The analysis of the data is given below.

Infection Control Committee Members

Demographic Data

Response	Frequency	Percentage
Male	6	40
Female	9	60
Total	15	100

Table.1 The frequency distribution table showing the gender wise distribution of respondents.

From Table 1, it is clear that among the respondents, 40 % are males and 60% are females.

Response	Frequency	Percentage
0-20 years	0	0
20-40 years	9	60
Above 40 years	6	40
Total	15	100

Table 2. Frequency table showing the age wise distribution of the respondents

From Table 2, it is clear that among the respondents, 60% of the respondent are in between age group 20-40 and the remaining 40 % in the age group above 40 years.

Response	Frequency	Percentage
0-5 years	7	46.66
5-10 years	4	26.66
Above 10 years	4	26.00
Total	15	100

Table 3 The frequency table showing years of experience of the respondents

From Table 3, it is clear that 46.66% of respondents have experience between 0-5 years. 26.66% each of the respondents have experience between 5-10 years and above 10 years.

Qualification	Frequency	Percentage
Diploma	2	13.33
Degree	3	20
Post graduation	10	66.66
Total	15	100

Table 4 The frequency distribution table showing qualification of the respondents

From Table 4, it is clear that 13.33% of respondents are diploma holders 20% have degree as qualification and 66.66% of the respondents have post-graduation as qualification.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 5 The frequency distribution table showing whether there is an infection control committee.

From Table 5, it is clear that all the respondents are of the opinion that that there is Infection Control Committee in the hospital.

Response	Frequency	Percentage
10-15	11	73.33
16-20	3	20
21-25	1	6.66
Total	15	100

Table 6. Frequency table showing the number of members in the Infection Control Committee

Table 6 shows the awareness of respondents about the number of members in the Infection Control Committee. From Table 4.6, it is clear that 73.33% of respondent say that the number is between 10-15, 20% say that it is between 16-20 and 6.66% say that the number of members in the committee is between 21-25.

Response	Frequency	Percentage
Headof microbiology	1	6.66
Hospital administrator	3	20
Infection control nurse	0	0
Medical superintendent	11	73.33
Total	15	100

Table . 7 Frequency table showing the head of infection control committee

Table 7 shows the opinion of the respondents about the heads of the infection control committee. From Table 4.6, it is clear that 6.66% of the respondents think that Head of microbiology is the head of control committee. 20% say that it is hospital administrator. 73.33% say that it is the medical superintendent. Nobody think that infection control nurse is the head.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table.8 The frequency distribution table showing that whether there is any training on infection control

From Table 8, it is clear that all the respondents are of the opinion that that there is training on infection control in the hospital.

Response	Frequency	Percentage
Medical staff	4	26.66
Non-Medical staff	0	0
Technical staff	0	0
Non-technical staff	0	0
All staff	11	73.33
Total	15	100

Table 9 The frequency distribution table showing the beneficiaries of infection control training

Table 9 shows the opinion of the respondents about who is beneficiaries of the infection control training. 26.66% of the respondents think that medical staff alone is the beneficiaries. 73.33% say that all the staff are benefitted from the training.

Response	Frequency	percentage
Weekly	2	13.33
Monthly	12	80.00
Half yearly	1	6.66
Yearly	0	0
Total	15	100

Table 10 Frequency table showing the frequency of training given to staff

Table 10 shows show the opinion of the respondents about the frequency of infection control training given to the staff. 13.33% of the respondents think that it is weekly. 80% say it is monthly. 6.66% think that it is half yearly.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	0	100

Table 11 Frequency Table showing whether the committee evaluate training programme

From Table 11, it is clear that all the respondents are of the opinion that that the infection control committee evaluates the infection control training in the hospital.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 12 Frequency Table showing whether the infection control committee is having written Manuel.

From Table 12, it is clear that all the respondents are of the opinion that there is a written Manuel for the Infections Control Committee.

Response	Frequency	Percentage
Yes	14	93.33
No	1	6.33
Total	15	100

Table 13. Frequency table showing whether the infection control committee properly follow the written Manuel.

Table 13 shows show that 93.33% of the respondents are of the opinion that the committee is following the written Manuel. But 6.66 % of respondents think that the committee is not following the written Manuel.

Response	Frequency	Percentage
Daily	0	0
Weekly	1	6.66
Monthly	13	86.66
Yearly	1	6.66
Total	15	100

Table 14 Frequency table showing the opinion of the respondents about the frequency of conducting infection control meeting

Table 14 shows show the opinion of the respondents about the frequency of infection

control meeting. 86.66% of the respondents think that there is monthly infection control meeting. 6.66% say it is weekly. Another 6.66% think that it is yearly.

Response	Frequency	Percentage
Yes	14	93.33
No	1	6.33
Total	15	100

Table 15 Frequency Table showing committee has definite scope and objectives

Table 15 shows show that 93.33% of the respondents are of the opinion that the committee has definite scope and objectives. But 6.66 % of respondents think that the committee has no scope and objectives.

Response	Frequency	Percentage
Annually	11	73.33
Half yearly	2	13.33
Not revising	2	13.33
Total	15	100

Table 16 Frequency Table showing the frequency of revising infection control committee.

Table 16 shows show opinion of the respondents about the frequency of revising the infection control committee. 73.33% of the respondents think that the infection control committee is revising annually. 13.33% think that the revision is half yearly. 13.33% say that the infection control committee is not revising at all.

Response	Frequency	Percentage
Yes	9	60
No	6	40
Total	15	100

Table 17 Frequency distribution table showing whether there is High risk areas and procedures in the manual

Table 17 shows show that 60% of the respondents are of the opinion that there is high risk areas and procedures in the Manuel. But 40 % of respondents think that there is no such high-risk areas and procedures in the Manuel.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 18 Frequency distribution table showing whether hand washing facilities are adequate (sinage, solution, drier, napkin)

Response	Frequency	Percentage
Yes	12	80
No	3	20
Total	15	100

Table 19 Frequency distribution table showing whether the sample to be audited for hand hygiene practice.

Table 19 shows show 80% of the respondents has the opinion that the sample should be audited for hand hygiene practice. Only 40% respondents have the opinion that there is no audit for hand hygiene practice.

Response	Frequency	Percentage
Yes	12	80
No	3	20
Total	15	100

Table 20 Frequency Table showing whether there is sufficient no of nurses for surveillance activity.

Table 20 shows show 80% of the respondents has the opinion that there is sufficient number of nurse surveillance activity. But 20 % of respondents think that there is no sufficient number of nurses for surveillance activity.

Response	Frequency	Percentage
Yes	14	93.33
No	1	6.66
Total	15	100

Table 21 Frequency Table showing whether there is biomedical waste management process.

Table 21 shows show 93.33% of the respondents are of the opinion that there is biomedical waste management process in the hospital. But 6.33 % of respondents think that there is no biomedical waste management process in the hospital.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 22 Distribution table showing the frequency of corrective action for issues noticed in the committee.

Table 22 shows 86.66% of the respondents are of the opinion that corrective actions are regularly taken for issues noticed in the committee. But 13.33 % of respondents think that no such corrective actions are taken.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 23 Frequency distribution table showing whether the infection control committee consider the suggestions from staff and patient in prevention of infection.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table. 24 Distribution table showing whether there is any antibiotic Policy.

From Table 24, it is clear that all the respondents are of the opinion that there is an antibiotic policy in the Infections Control Committee.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 25 Do you have a Surveillance Policy

Table 25 shows show 86.66% of respondents are of the opinion that there is a surveillance policy in the hospital. But 13.33% of respondents do not think so.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 26 Do you have an Isolation Policy

Table 26 shows show 86.66% of respondents are of the opinion that there is an isolation policy in the hospital. But 13.33% of respondents do not think that there is an isolation policy in the hospital.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 27 Table showing whether Infection Control Committee get support from Management

From Table 27 it is clear that all the respondents are of the opinion that all the respondents are of the opinion that the Infection Control Committee get support from the management.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 28 Does Infection Control Committee perform surveillance activities in the hospital

From Table 28, it is clear that all the respondents are of the opinion that the Infection Control Committee performs surveillance activities in the hospital. This result is clearly represented in Figure 4.28

Response	Frequency	Percentage
Yes	14	93.33
No	1	6.66
Total	15	100

Table 29 Frequency table showing whether Infection Control Committee programme is updating every year

Table 29 shows show 93.33% the respondents are of the opinion that the Infection Control Committee programme is updating every year. But 6.66% say that it is not.

Response	Frequency	Percentage
By observation	0	0
By asking to supervisors	1	6.66
Through checklist	0	0
All the above	14	93.33
Total	15	100

Table 30 Frequency Table showing how does infection control committee make sure the staff are following the infection control methods.

Table 30 shows show how. 6.66% of the infection control committee make sure the staff are following the infection control methods. The respondents say that it is by asking supervisors. 93.33% of the respondents say that it is by adopting all methods such as observation, using checklist etc.

Response	Frequency	Percentage
Hand washing	1	6.66
Wearing glows	1	6.66
Using mask	1	6.66
Using goggles	0	0
All the above	12	80
Total	15	100

Table 31 Infection Control Methods proposed by the Infection Control Committee

Table 31 shows show how show the responses of the respondents about infection control measured proposed by the committee. Majority of the respondents are of the opinion that the Committee proposed all control measures such as hand washing, wearing glows and using mask. Nobody said about using goggles.

Response	Frequency	Percentage
Yes	14	93.33
No	1	6.66
Total	15	100

Table 32 Does the committee train and educate staff on infection control measures

Table 32 shows show that 93.33% the respondents are of the opinion that the Infection Control Committee train and educate staff about the Infection Control measures.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 33 Does the committee give isolation room for infected patients?

Table 33show that all the respondents are of the opinion that the committee give isolation room for infected patients. This result is clearly represented in Figure 4.33

Response	Frequency	Percentage
WHO	0	0
CDC	0	0
Both	15	100
Total	15	100

Table 34 Which guidelines the infection control committee follow for infection control.

Table 34 show that the opinion of the respondents about the guidelines followed by the Infection Control Committee for infection control. All of the respondents think that the committee follows the guidelines issued by WHO and CDC.

Response	Frequency	Percentage
Yes	13	86.66
No	2	13.33
Total	15	100

Table 35 Does the committee give vaccination to the staff correctly?

Table 35 shows show that 86.66% the respondents are of the opinion that the committee give vaccination to the staff correctly. But 13.33% of the respondents say the Infection control committee does not give vaccination to the staff correctly.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 36 Does the committee evaluate the number of hospitals acquired infection.

Table 36 show that all the respondents are of the opinion that the committee evaluate the rate of hospital acquired infection. This result is clearly represented in Figure 4.36

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 37 Does the rate of hospital acquired infection is within the limit recommended by WHO in this hospital.

Table 37show that all the respondents are of the opinion that the rate of hospital acquired infection is within the limit recommended by WHO in this Hospital.

Response	Frequency	Percentage
Daily	1	6.66
Weekly	1	6.66
Monthly	13	86.66
Annually	0	0
Total	15	100

Table 38 How often does the committee evaluate hospital acquired infection

Table 38 shows show the opinion of the respondents about how often the infection control committee evaluates hospital acquired infection 86.66 % of the respondents say that the committee evaluates hospital acquired infection monthly. 6.66% say it is daily and another 6.656% say that it is weekly.

Response	Frequency	Percentage
Yes	15	100
No	0	0
Total	15	100

Table 39 Does the Infection Control Committee keep the records correctly?

Table 39 show that all the respondents are of the opinion that the Infection Control Committee keep the records correctly.

Questionnaire For Ward in Charge

Demographic Profile

Respondents	Frequency	Percentage
Male	0	0
Female	35	100
Total	35	100

Table 40 Sex-wise distribution of the respondents.

Table 40shows that all the respondents selected for the study are females.

Age group of the respondents	Frequency	Percentage
0-20 Yrs	0	0
20-40 Yrs	20	57.14
Above 40 Yrs	15	42.86
Total	35	100

Table 41 Age-wise distribution of the respondents

Table 41reveals that majority (57.14%) of the respondents are from the age group 20–40years. 42.86% are from above 40 years of age group. There are no respondents in the age group between 0-20 years of age group

Years of Experience	Frequency	Percentage
0-5 Yrs	0	0
5-10 Yrs	10	28.57
Morethan10Yrs	25	71.43
Total	35	100

Table 42 Experience of the respondents

Table 42 shows that majority of the respondents (71.43%) have more than 10 years of experience. 28.57% have experience between 5-10 years. There is nobody less than 5 years of experience.

Qualification of Experience	Frequency	Percentage
Diploma	23	67.71
Degree	9	25.71
Postgraduate	3	8.57
Total	35	100

Table 43 Qualification of the respondents

Table 43reveals that 67.71% of respondents are diploma holders, 25.71% are graduate and the remaining 8.57% are postgraduates.

Response	Frequency	Percentage
Yes	35	100
No	0	0
Total	35	100

Table 44 Frequency table showing whether the hospital has infection control committee

Table 44 shows that all the respondents have the opinion that there exists an effective control committee in the hospital.

Response	Frequency	Percentage
Excellent	33	94.28
Very good	2	5.72
Good	0	0
Very bad	0	0
Total	35	100

Table 45 Frequency table showing the opinion about the effectiveness of infection control committee in the hospital

Table 45 shows show that 94.28% of respondents have an opinion Excellent about the effectiveness of infection control committee in the hospital. 5.74% have opinion Very good. Nobody has an opinion Good or very

bad about the effectiveness of infection control committee in the hospital.

Head of ICC	Frequency	Percentage
Microbiologist	10	28.57
Hospital administrator	1	2.86
Infection control doctor	5	14.28
Medical Superintendent	19	54.29
Total	35	100

Table 46 Frequency table showing who is the head of the infection control committee.

Table 46 shows show that majority of the respondents (54.29%) pointed out that the head of the infection control committee is the Medical Superintendent.

Response	Frequency	Percentage
Yes	35	100
No	0	0
Do not know	0	0
Total	35	100

Table 47 Frequency table showing whether infection control committee give training to staff about infection control.

Table 47 shows that all the respondents have the opinion that the infection control committee gives training to staff about infection control.

Frequency	Frequency	Percentage
Weekly	3	8.57
Monthly	26	74.29
Half yearly	4	11.43
Yearly	2	5.71
Total	35	100

Table 48 Table showing the frequency of the training given to staff about infection control

Table 48 reveals the opinion of respondents about the training on infection control given to staff. 74.29% say it is monthly, 8.57 say that it is weekly 11.43% say that it is yearly and 5.71% say that it is only yearly.

Frequency	Frequency	Percentage
Excellent	31	88.57
Very good	3	8.57
Good	1	2.86
Very bad	0	0
Total	35	100

Table 49 Table showing the opinion of the respondents about the effectiveness of training given.

Table 49 reveals the opinion of the respondents about the training give. 88.57% of the respondents say it is excellent, 8.57 % say it is very good and 2.86% say it is good. Nobody has a negative opinion about the training.

Response	Frequency	Percentage
Yes	32	91.43
No	3	8.57
Do not know	0	0
Total	35	100

Table 50 Frequency table showing whether the committee evaluates the training programme.

Table 50 reveals the opinion of the respondents that 91.43% of the respondents say that the committee evaluates the training programme. 8.67% opinioned that the committee does not evaluate the training.

Response	Frequency	Percentage
Yes	30	85.71
No	5	14.29
Do not know	0	0
Total	35	100

Table 51 Frequency table showing whether the ICC carry out visit in the staff area

Table 51 reveals that 85.71% of the respondents opinioned that the ICC carries out visit in the staff area. But 14.29% of the respondents say that the ICC do not visit the staff area.

Response	Frequency	Percentage
Yes	34	97.14
No	1	2.86
Do not know	0	0
Total	35	100

Table 52 Frequency table showing whether the committee invite suggestions form staff**.**

Table 52 reveals that 97.14% of the respondents opinioned that the ICC inviter suggestions from the staff. But 2.86% of the respondents say that the ICC do not invite suggestions from the staff.

Response	Frequency	Percentage
Yes	32	91.43
No	2	5.71
Do not know	1	2.86
Total	35	100

Table 53 Frequency table showing whether the committee perform surveillance activities**.**

Table 53 reveals that 91.43% of the respondents are of the view that the committee perform surveillance activities but 5.71% of the respondents say that the committee do not perform any surveillance activities.2.86% have no idea about it.

Response	Frequency	Percentage
Yes	33	91.43
No	2	5.71
Do not know	0	0
Total	35	100

Table 54 Frequency table showing whether the infection control committee have defined scope and objectives.

Table 54 reveals that 94.29% of the respondents say that the committee has defined scope and objectives. 5.71% of the respondents say that the committee has no defined scope and objectives.

Response	Frequency	Percentage
Daily	9	25.71
Weekly	16	45.71
Bimonthly	7	20.00
Monthly	3	8.57
Total	35	100

Table 55 Table showing frequency of visit of the Infection Control Committee to the department.

Table 55 reveals the opinion of the respondents about the frequency of visit of the ICC to the department. 25.71% say that the visit is daily, 45.71% say that it is weekly, 20% say that it is bimonthly and the remaining 8.57% of the respondents say that the visit if monthly only.

Response	Frequency	Percentage
Yes	30	85.71
No	5	14.29
Total	35	100

Table 56 Frequency table showing the awareness of high-risk areas and procedure in the hospital.

Table 56 reveals that 85.71% of the respondents have the awareness of high-risk areas and procedures in the hospital.

Response	Frequency	Percentage
Yes	34	97.14
No	1	2.86
Total	35	100

Table 57 Frequency table showing whether the availability of washing facility is adequate in the hospital.

Table 57 reveals that 97.14% of respondents think that washing facility is the hospital is adequate while 2.86% of respondents think otherwise.

Response	Frequency	Percentage
Yes	34	97.14
No	1	2.86
Total	35	100

Table 58 Frequency table showing whether reporting the issues to Infection Control Team

Table 58 reveals that 97.14% of respondents think that issues are reported to Infection Control Team while 2.86% do not think so.

Response	Frequency	Percentage
Yes	29	82.86
No	6	17.14
Total	35	100

Table 59 Frequency table showing the suggestions of Hospital Infection Control Committee about number of samples to be audited for hand hygiene practice.

Table 59 reveals that 82.86% of respondents respond that the suggestions of Hospital Infection Control Committee about number of samples to be audited for hand hygiene practice while 17.14% do not think so.

Response	Frequency	Percentage
Yes	18	57.43
No	17	48.57
Total	35	100

Table 60 Frequency table showing whether the infection control nurse is sufficient in number for surveillance activities**.**

Table 60 reveals the opinion of the respondents about the sufficiency of number nurses for surveillance. 51.43% are of the opinion that the number is sufficient while 48.57% think that the number is insufficient for surveillance.

Response	Frequency	Percentage
Yes	35	100
No	0	0
Total	35	100

Table 61 Frequency table showing whether the staff knows the method of biomedical waste management process in the hospital.

Table 61 shows that all the respondents have the opinion that the staff knows the method of biomedical waste Management process in the hospital.

Response	Frequency	Percentage
Yes	32	91.42
No	3	8.58
Total	35	100

Table 62 Frequency table showing whether there is any written infection control Manual.

Table 62 shows that 91.42% of the respondents have the opinion that there is a written infection control Manuel. The remaining 8.58% say that there is no such written manual.

Response	Frequency	Percentage
Yes	26	74.28
No	9	25.72
Total	35	100

Table 63 Frequency table showing whether the staff is having awareness about infection control manual.

Table 63 shows that 74.28 the respondents have the opinion that they are aware about infection control manual while 25.72% have no such awareness.

Response	Frequency	Percentage
Weekly	3	8.58
Monthly	20	57.14
Bi-annually	12	34.28
Annually	0	0
Total	35	100

Table 64 Frequency table showing how often the Infection Control Committee is conducting meeting.

Table 64 reveals that 8.58 % of the respondents say that infection control committee conducts meeting weekly, 57.14% say that it is monthly and 34.28 % say that it is semiannually and nobody is of the opinion that the meeting is conducted annually.

Response	Frequency	Percentage
Hand washing	5	14.29
Wearing gloves	0	0
Using mask	0	0
All the above	30	85.71
Total	35	100

Table 65 Frequency table showing the infection control measures which are practicing

Table 65 reveals that all the infection control measures are practiced in the hospital.

Response	Frequency	Percentage
By observation	8	22.86
By asking to supervise	4	11.43
Through health	0	0
All the above	23	65.71
Total	35	100

Table 66 Frequency table showing how to make sure the staff members are following the infection control method.

Table 66 reveals that respondents opinioned that all above methods make sure that staff members are following the infection control methods.

Response	Frequency	Percentage
Yes	28	80
No	7	20
Total	35	100

Table 67 Frequency table showing whether the hospital infection committee train and educate staff on infection control measures

Table 67 reveals 80% of the respondents opinioned that infection control committee train and educate staff on infection control measures. 20% of the respondents say that there is no such training.

Response	Frequency	Percentage
Quality department	1	2.86
HR Department	0	0
Infection Control department	34	97.14
Total	35	100

Table 68 Frequency table showing that the responsible person to whom to report the infection outbreak.

Table 68 reveals that 97.14% of the respondents opinioned that the responsible person whom to report the infection outbreak is Infection Control Department. 2.86% say that it is to the Quality Department.

Response	Frequency	Percentage
Yes	28	80
No	7	20
Total	35	100

Table 69 Frequency table showing whether management give quality disinfectant for cleaning procedures all area in the hospital**.**

Table 69 reveals that 80% of the respondents opinioned that quality disinfectant has to be given for cleaning procedures all the areas in the hospital. 20% respondents say no to it.

Response	Frequency	Percentage
Yes	23	65.71
No	12	34.29
Total	35	100

Table 70 Frequency table showing the infection control department collect swab before and after fogging

Table 70 reveals that that 65.71% of t5he respondents opinioned that infection control department collects the swab before and after fogging. 34.29% of respondents say that there is no swapping before and after fogging.

- 80% respondents opinioned that quality disinfectant is given for cleaning procedures. But 20% responded that they are not getting quality disinfectant for cleaning.
- 65.71% respondents opinioned that infection control department swab before and after fogging. 34.29% responded that there is no swab collection before and after fogging.
- The opinion of the infection control committee members and ward in charges involved in this study revealed the following.
- All the participants in the study opinioned that there is a written manual and most of them are aware about it.
- The staff are getting training periodically.
- Proper hand washing procedures are followed and hand washing facilities are also adequate.
- There is good antibiotic policy in the hospital
- Hospital infection control committee is getting adequate support from the management
- Hospital is following the guilders of CDC and WHO
- Hospital is providing vaccination to all the staff
- Hospital infection control committee frequently evaluate the hospital acquired infection rate
- The infection control team and infection control department are functioning efficiently and effectively.
- The head of the infection control committee is the Hospital superintendent.

The above findings revealed that the hospital is following most of the standards and procedures according to the guidelines. But few respondents opinioned that the Infection control committee is not effective. The reason for that may be the newly appointed staff is not familiar with hospital infection control committee. The induction training programme has not included the importance of infection control committee.

In some other cases the duty schedule of the staff is not allowing to attend the training. Sometimes the staff are not interested to change to the new area. Infection control manual is not available to the staff. The absence of strict supervision by the higher authority may be the reason for the lack of awareness among the staff about the infection control committee.

Suggestions: The opinion of the Infection Control Committee members and the ward in charges are involved in this study revealed that the hospital infection control committee is effective. So, the following suggestions are given based on the findings.

- The staff need to be trained and documentation is needed and provide standard equipment's.
- There should be posters, charts, handouts and snippets of the guidelines displayed on the strategic places in every department and wards for ready reference.

- Hospital infection control measures guideline must be updated frequently as an essential procedure.
- Proper isolation practices such as separate qubicals for infected patients, negative pressure for isolated infected patients to prevent spread of infection through air born route.
- Proper infection control processes by taking standard precautions like hand washing and use of PPE [26].

For improving the functions of Infection Control Committee

- Provide appropriate feedback of surveillance data to clinician and infection Control, Committee so that they should be evaluated.
- Education programmes should be planned from time to time for health care workers
- Immunization of all health workers who are at risk is also necessary.
- Antibiotic policy should be modified so antibiotic prophylaxis should be given in time and prevent the spread of antibiotic microorganisms.
- Hospital Infection control programmes should be organized for the community
- Monthly staff meeting and training of infection control team so as to evaluate the programmes timely.
- Frequent assessment of staff knowledge regarding infection control so as to modify the curriculum of training.
- Regular meeting between ward in charges and infection control nurses so as to have good communication
- Maintenance of records related to infection control is essential for future reference.
- Special consideration should be needed in the area of biomedical waste management
- Appoint a trained Epidemiologist
- Encourage single use devices for patient care

Motivational activities for staff: The environment of the hospital is necessary for overall maintenance of optimum standards of infection control, Quiz contest for clinician and nursing staff should be conducted, Debate competition and poster competition should be done, Celebrate hand hygiene day on May 5th every year.

CONCLUSION

The problem studied was to assess the effectiveness of Infection Control Committee of Pushpagiri Medical College, Tiruvalla. The study was for 45 days starting from 6-5-2019 to 28-6-2019. The data was collected from 15 hospital infection control committee members and 35 ward in charges (link nurses) using questionnaires. The management and staff of the institution fully supported the study. They have provided all facilities which I needed during the study period.

Quality in health care is no more an unachievable goal in current health care setup. Hospitals are now aiming at accreditation under various independent accreditation bodies. This hospital is aiming at NABH Accreditation in the near future and hence the management is striving to achieve quality in every department of the hospital. So, it is very essential to assess the effectiveness of hospital infection control committee so that corrective and preventive actions are taken to eliminate the cause of hospital infections and make quality and safe health delivery. So, improve patient's outcomes and safety are the goal of infection control committee. To attain this goal by implementing policies for administrative support, infrastructure, supporting manpower, good

practices and procedures, review methods are needed.

The study has given me an opportunity to interact with the quality department and infection control committee and all the departments of the hospital. A close evaluation of the functions and importance of the hospital infection control committee was made available to me. The study was beneficial to the hospital also. A study of this nature was not conducted in the hospital earlier. It is hoped that the study may provide an opportunity to evaluate their activities critically and make adequate corrections to the infection control committee thereby helping the public.

On the basis of the study hospital can conduct further studies in this area. As research scholar I have tried my level best to assess the effectiveness of the infection control committee of Pushpagiri Medical College, Tiruvalla. It was an inspiration to me to conduct the various aspects of this research problem.

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