

Nurses Knowledge Related of Communicable Diseases Precautions to Administrative Development at Babylon for Maternity and Pediatric Teaching Hospital

Noor Moosa Kadhim AL-Bayati¹, Naji Yasser Saadoon AL-Mayahi²

¹Department of Community Health Nursing, College of Nursing, University of Babylon, Iraq

²Department of Community Health Nursing, College of Nursing, University of Babylon, Iraq

Abstract

Background: Although infection is most common in patients upon admission, health care workers also serve as potential vectors for pathogenic agents. Healthcare workers (HCWs) are at an increased risk of occupationally acquired infections caused by both blood-borne pathogens. The objectives of this study are to: Assessing nurses knowledge related to communicable disease control precautions. Identify socio-demographic characteristics of the study sample. Identify relationship their human resources management Methodology: A descriptive study was carried-out between (200) nurses's in the medical field. for Maternity and Pediatric at Babylon Teaching Hospital. The scores obtained for answers to closed-ended questions were applied to determine the knowledge scale about overall management evaluation, to assess nurses knowledge communicable disease control precautions and to know the applicability of the (CD) program in relation to the development of the hospital's human resource management starting from the period from 17th march, 2021 to 15th May 2022. **Results:** The results showed that the vast majority of hospitals lacked human resources, including administrative funding, and were closely related to a degree of knowledge of the training program about (P-value =0.001). **Conclusions of the study:** The study summarize that the majority of health workers are not trained in the infectious disease control program for both sexes, deficiency of supervision of quality lead to negatively affects the management's quality evaluation. In additional insufficient human resources , most health workers are not obligated to wear their own equipment **Recommendations:** Encouraging health workers, through health education, to adhere to established control protocols, and infection prevention and control guideline provide newly nurses with training courses based on standard precautions at regular intervals.

Keywords: Knowledge, Communicable diseases, Precautions

1. Introduction

Infectious diseases continue to be a significant barrier to newborn and child health, accounting for (23%) of all neonatal fatalities each year, with infection-related infectious disorders accounting for (2.7) million neonatal deaths each year [1]. Many infection control measures, such as appropriate hand hygiene and the correct application of basic precautions during invasive procedures are simple and of low-cost, but require staff accountability and behavioral change, in addition to improving staff education, reporting and surveillance systems [2]. The mortality and morbidity related with infection-related health care are extremely high. COVID-19 has spread over Iraq infecting every region. The overall number of cases increased to 458, also, the death chide increased-to 40, that after, the four new deaths were approved. Furthermore, the number recovery rate increased to 122 [3]. To minimize, mortality, it is critical, to maintain and enhance the quality of care. According to the world health organization (WHO), improving the quality of health care services offered to patients-and their families-will enhance their health. To do this, health care must be safe, effective,

and inexpensive, timely, efficient, fair, and people-centered [4].

Health-education focuses on health promotion and disease prevention. The community health nurse's duty is teaching and enabling individuals to avoid disease, adopt lifestyle changes, and enhance health for themselves, their families, the environment, and their community [5]. Healthcare personnel using standard precautions has been identified as an effective method of preventing and controlling healthcare-associated illnesses. These precautions protect not only the patient, but also the medical staff and the environment. Pathogenic microbes such as bacteria, viruses, parasites, and fungi cause infectious diseases. The diseases can be passed from person to person, either directly or indirectly, through fluid exchange, vector exposure, or the environment [6]. Compliance of healthcare workers (HCWs), particularly nurses, in following infection control precautions is recognized as an effective means of preventing and controlling disease transmission not only among patients but also among HCWs and to the environment. Nurses play an important role in providing patients with continuous care. Their understanding and adherence to all measures associated with disease transmission

prevention and control are regarded as top priorities. The lack of knowledge about the importance of adherence is a factor that contributes significantly to medication nonadherence [7].

2. Methodology

Descriptive research was undertaken with (200) health-care employees who were randomly chosen by non-probability sample (convenience sampling), administered questionnaire, in order to achieve the early stated objectives, and to assessing nurses' knowledge related to communicable disease control precautions for regarding for development of a hospital management starting from the period from 17th march, 2021 to 15th May 2022. The scores achieved for answers to closed-ended questions were used to measure the level of knowledge of comprehensive management evaluation, this part is consisting of (11) items about overall management evaluation, the domain is performance of staff of assess administration monitors and disease control precaution. These-items are deliberate as well as responses of partakers, by using a dichotomous Likert scale that consists of two axes: (Yes) (No). In this questionnaire, the opposite questions were used in this survey. The group includes (13) experts, who have more than 5 years of expertise in their profession were chosen after a thorough

examination of the questionnaire's content to determine its validity.

The Questionnaire is Consisted of the Following

Through a comprehensive review of relevant literature and previous studies, it was composed of (3) major parts.

A: Included personal information sheet which are concerned with the information about socio-demographic characteristics of the staff from epidemic wards, of the subjects, include [age, ,gender, training for CD program unit , marital status, residence , level of educational, empolymnt at the CD unit (years)]

B: This part is consisting of (11) items about overall management evaluation deals with staff have the ability to gain experience, training and development, supervision, skills, administration, training programs, vaccinations, program evaluation.

C: This part is consist of (5) items about nurses knowledge related to human resources management deals with efficient human,financial resources, sufficient staff, cleaners,financial management.

3. Results

This chapter summarizes the findings and data analysis in scientific tables that correspond to the study's objectives:

Table 1: Distribution of the study sample related to their socio-demographical characteristics

variables	(n=200)	F	%
Age (years)	-29	76	38
	30-39	43	21.5
	40-49	35	17.5
	50 above	46	23
	Total	200	100%
variables	(n=200)	F	%
Gender	Male	160	80
	Female	40	20
	Total	200	100%
Training for CDC Program	Yes	88	44
	No	112	56
Marital status	Single	53	26.5
	Married	127	63.5
	Widowed	5	2.5
	Divorced	11	5.5
	Separated	4	2
	Total	200	100 %
Residence	Urban	153	76.5
	Rural	47	23.5
	Total	200	100%
Level of education	Secondary Nursing School	55	27.5
	Institute (Diploma)	70	35
	College & above	75	37.5
	Total	200	100 %

Note χ^2 (Chi-Square), P value \leq 0.05 M. S (Mean Score)

Table 2: Nurses Knowledge Related to Study Sample and their Overall Management Evaluation items

List	Standards	Yes		No		Chi-square				Sig.
		F.	%	F.	%	χ^2	P-value	S. D	M. S	
A1	Staff have the ability to gain experience by participating in group work	42	21	158	79	67.28	< 0.0001	0.40	1.79	S**
A2	The institution seeks to establish an information system for staff training and development	61	30.5	139	69.5	30.42	< 0.0001	0.46	1.69	S**
A3	Supervision of quality staff	47	23.5	153	67.5	56.10	< 0.0001	0.42	1.76	S**
A4	Administration monitors the quality-of-service provision continuously	32	16	168	84	92.48	< 0.0001	0.36	1.84	S**
A5	Administration works to address errors as soon as they occur	118	59	82	41	6.48	0.011	0.49	1.41	N. S
A6	Training programs aim to emphasize the importance of quality in health institutions	15	7.5	185	92.5	144.500	<0.0001	0.26	1.92	S**
A7	The administration maintains continuous communication with employees and facilitates access staff to him	196	98	4	2	184.320	<0.0001	0.140	1.02	N. S
A8	Continuously training staff on development processes	22	11	178	89	121.680	<0.0001	0.313	1.89	S**.
A9	Provide all vaccines in the institution	91	45.5	109	54.5	1.620	0.203	0.499	1.54	N. S.
A10	Get the necessary vaccinations for all employees	137	68.5	63	31.5	27.380	<0.0001	0.46	1.31	N. S.
A11	Program evaluation	43	21.5	157	78.5	64.980	<0.0001	0.41	1.78	S**
Total Chi-Square (χ^2) =387.552 Total (P-value) =0.0001										
Note: Sig. (Level of Significant) M. S (Mean Scores), F. (Frequency), S. (Significant), N.S. (No significant)										

Table 2: Show represents findings out of this study sample in respect to their respond to reveal that of scores is highly significant on items such as: (1, 2, 3, 4, 6, 8, 11), while non-significant for items such as: (5, 7, 9, 10) for their overall management evaluation . (P>0.05).

Table 3: Knowledge Related to Study Sample and their Overall Human Resources Management

List	Standards	Yes		No		Chi-square				Sig.
		F.	%	F.	%	χ^2	P-value	S. D	M. S	
B1	Provides efficient human resources to provide its services with high quality	53	26.5	147	73.5	44.180	< 0.0001	0.442	1.73	S**
B2	Sufficient financial resources allocated to implement total quality management	79	39.5	121	60.5	8.820	0.003	0.490	1.60	N. S
B3	There are sufficient staff in this center	43	21.5	157	78.5	64.980	< 0.0001	0.41	1.78	S**
B4	Cleaners they wear their own equipment	53	26.5	147	73.5	44.180	< 0.0001	0.442	1.73	S**
B5	Financial management	46	23	154	77	58.320	< 0.0001	0.421	1.77	S**
Total Chi-Square (χ^2) =16.293 Total (P-value) =0.0003										

Table 3: Shows the domain of human resources management questionnaire. The responses to item of domain, shows their financial management is largest accounted that of score in the light of (1.7700).

4. Discussion

As a result, male health workers were found to be substantially more prevalent than female health workers, socio-economic status has a profound impact on many diseases and disorders, including an array of pain conditions an important finding is that socio-economic inequalities are not confined to people who live in poverty. Instead, they manifest as a gradient in disease risk that increases among progressively lower rungs of the socioeconomic ladder. [8] This evaluation has shown that the organizational structure has suffered from a lack of funding, with a mechanism in place to ensure the treatment of all cases diagnosed by the medical and

health staff starting from the health staff, and the lack of the information system for staff training and development. Table [3], reveals that most of these items reveal that of scores is highly significant, there is a weakness in quality management, weakness of the staff information system (especially the training and development system) in health programs and seminars related to communicable diseases, this study agrees with study done by [9] who found study in Switzerland, most respondents (69%) favoured the use of outcome indicators for quality control; only (13%) favoured indicators pertaining to process or structure of care, according to the health care financing administration, (70%) of health care workers believed statistics on death rates were poor for improving quality of health care, while (30%) thought they were fair or better. In order for physicians to make good use of mortality statistics, crucial information must be provided to them, allowing for interpretation and constructive criticism.

These results agrees with ^[10] who has reported to evaluate the practices of healthcare professionals in primary health care institutions in terms of infection control. Table (4), analysis of this assessment depicts that provides efficient human resources to provide its services with high quality, the results obtained 53 (26.5%), This outcome agree with the study done in Turkey by ^[11] they detected that by (100%) of top tier-management, 65.1% with mid-tier management was found to have a high correlation with organizational obligation, researcher' applied the questionnaires included (169) participants from top tier management personnel.

5. Conclusions

1. The study summarize that the majority of health workers are not trained in the infectious disease control program for both sexes.
2. The current analysis reveals that there are significant gaps in standards, particularly among health workers and administrators.
3. Shortage human resources (staff, medical paws, mask) In additional most health workers are not obligated to wear their own equipment.
4. Insufficient financial resources allocated to implement total quality management.

6. Recommendations

Encouraging nurses to improve their knowledge and update their information through health education, to adhere to established control protocols and infection prevention and control guideline provide newly nurses with training courses based on standard precautions at regular intervals.

List of Abbreviation

CDC: Centers for Diseases Control and Prevention
TQM: Total Quality Management

References

Candel FJ, Sá MB, Belda S, Bou G, Del Pozo JL, Estrada O, Ferrer R, del Castillo JG, Julian-Jimenez A, Martin-Loeches I, Maseda E. Current aspects in sepsis approach. Turning things around. *Revista Española de Quimioterapia*. 2018 Aug;31(4):298.

Ayed A. Knowledge and practice of nursing staff towards infection control measures in the Palestinian hospitals.

Al-Mosawi RM. Survey on Cases of Coronavirus Disease (COVID-19) in Iraq during Months of Year 2020.

Avia I, Hariyati RT. Impact of hospital accreditation on quality of care: a literature review. *Enfermeria clinica*. 2019 Sep 1; 29:315-20.

Saadoon NY, Khalifa MF. Evaluation of Organization Structure as Component of Quality Improvement for Maternal and Child Health Promotion in Baghdad City's Primary Health Care Centers. *Iraqi National Journal of Nursing Specialties*. 2014;27(1).

Eichemberger JR, Kawagoe JY, Andrade LG, Mohallem AG. Newly graduated nurses' knowledge about Specific Precautions in the pre-pandemic of COVID-19. *Escola Anna Nery*. 2022 Jun 15;26.

Ramadan Ahmed W, Thabet Mohammed G, Mohammed Hassan A, Salim Aidroos Al Hebshi H, A Mohammed A. Effect of Online Distance Learning on COVID19 Patients' Knowledge, Self-monitoring and Self-care at Assiut City. *Egyptian Journal of Health Care*. 2021 Jun 1;12(2):773-84.

Slade GD, Bair E, Mulkey F, Baraian C, Rothwell R, Reynolds M, Miller V, Gonzalez Y, Gordon S, Ribeiro-Dasilva M, Lim PF. Study methods, recruitment, sociodemographic findings, and demographic representativeness in the OPPERA study. *The Journal of Pain*. 2011 Nov 1;12(11):T12-26.

Graz B, Vader JP, Burnard B, Paccaud F. Quality assurance in Swiss University Hospitals: A survey among clinical department heads. *International Journal for Quality in Health Care*. 1996 Jan 1;8(3):271-7.

AL-Kerity SH, Naji AB. Evaluation of Healthcare workers' Practices Concerning Infection Control Measures at Primary Health Care Centers.

Şendoğdu AA, Kocabacak A, Güven Ş. The relationship between human resource management practices and organizational commitment: A field study. *Procedia-Social and Behavioral Sciences*. 2013 Nov 6;99:818-27.