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Research Article

COMPARATIVE STUDY OF THE KNOWLEDGE AND PRACTICE OF DOCTORS AND NURSES IN THE HANDOVER OF PATIENTS IN A TERTIARY HOSPITAL

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Abstract

Handover otherwise known as handoff is essential to avoid disjointed patients care. A wide gap in the knowledge and practice of clinical handover between doctors and nurses may cost the patient and the hospital. This study aims to x-rays and compares the knowledge and practice of clinical handover between doctors and nurses as well as their attributes and barriers to effective patient handover. This study was a cross-sectional study carried out at the Federal Medical Centre, Yenagoa. A sample size of 400, made up of 200 doctors and nurses was obtained. Cluster sampling was used to recruit the study respondents. The relationship between categorical variables was uncovered using the Chi-squared test. The level of significance was set at $p < 0.05$. Two hundred and twenty-five healthcare providers (56.2%) received some form of patient handover training. A small percentage of doctors (26%) have received formal handover training, whereas a large percentage of nurses (86.5%) have. About 11.5% of doctors believed that handover should be done with a well-written handover note, whereas 36.5% of nurses agreed, indicating a significant difference in this attribute ($X2 = 34.27$; p - 0.001). In terms of practice, 57.5% of doctors would routinely read and update handover information, whereas 87.0% of nurses would read and update handover notes during their shift. Doctors have too little formal training in clinical handover. Doctors and nurses seem to defer in their knowledge and practice of patient handover. Generally, handover documentation alongside verbal communication is preferred among nurses. A good number of doctors may be relying more on their memory for patients' handover.

Keywords: Handover, Knowledge, Practice, Doctors, Nurses.

INTRODUCTION

In the practice of medicine, providing appropriate patient care is essential, and patient handover is a significant aspect of that care. [1]A pivot point in the treatment of a patient both within and across professional groups is clinical handover. Patient handover practice is beneficial in many ways; when used correctly, benefits the patients and avoids litigation for the medical practitioner. [1] Correct or appropriate patient handover may be hampered by several issues. [2] Knowledge and practice patterns of handover may differ between and within professional healthcare groups. However, effective clinical handoff requires cooperation and communication between the various health providers. [3]Patient handover is simply the passing on of information and responsibility about a patient(s) to another person or professional group, informing them of the management plan and current clinical state of the patient(s). [1,3] With good patient handover, continuity of patient care is guaranteed. [3] In fact, the patient's management is uninterrupted. [3]The issues associated with ineffective or no clinical handover include lack of follow-up on the treatment plan, poor time management, patient dissatisfaction, reduced patient safety, increased risk of or actual injury and outright mortality. [4]Additionally, there is an increased cost to the patient and the healthcare system due to the inefficient use of hospital resources and the inadequate handover of care. [4] In a hospital context, patients are transferred from emergency rooms to theatre/wards, between shifts, and during calls. In the course of the day, they are also transferred from one individual/managing team to another. [5]

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Loss of information or incorrect information and additional time spent attempting to obtain missing and accurate information in patients' care are peculiarities linked with these points of transfer of responsibility for patient management. [5] It is trite knowledge that nurses and doctors share responsibility for patient management. [3,6] How the nursing and physicians interact and share information about patients 'care would determine the safety of patients and the quality of services rendered to them. [6] Before handover interactions between these two professionals, responsibility for patients' care would have been passed intra-professionally. [3] The training of these healthcare professionals may differ, and this may reflect in their practice of patient handover. Generally, clinical handover is poorly performed, when important information is omitted and unnecessary details are added. [7] This study aims to x-rays and compares the knowledge and practice of clinical handover between doctors and nurses as well as their attributes and barriers to effective patient handover.

METHODOLOGY

This was a cross-sectional study analytical study carried out at the Federal Medical Centre, Yenagoa. It is a 425-bed space, tertiary hospital, which serves as a referral hospital for primary, secondary and private health care facilities in the state and the neighbouring states of Delta and Rivers, Nigeria. Utilizing the cross-sectional study sample size calculation formula, a sample size of 400 was obtained. This was equally divided to compose of 200 doctors and nurses. Cluster sampling was used to recruit the study participants. An anonymous, well-structured, closed-ended questionnaire was given to each participant after informed consent was obtained.

The data acquired were the sociodemographic characteristic of health personnel and factors hindering effective patient handover as well as the knowledge and practice of patient handing over practices.

Ethical approval - This was duly given by the ethical committee of the hospital

Data analysis

The data were analyzed using SPSS version 20. Categorical variables were expressed in frequencies and percentages and presented using tables, and their relationship was assessed using the Chi-squared test. The level of significance was set at $p < 0.05$.

RESULTS

Sociodemographic characteristics of Nurses and doctors in the study

For the study, 400 healthcare professionals in total 200 doctors and 200 nurses were enrolled. Table 1 revealed that only 37.5% of doctors and 89.0% of nurses were females, indicating a significant gap in the gender distribution of these two healthcare professions. (X^2=114.10; p-0.001). The distribution of age (X^2=27.69; p-0.001), number of service years (X^2=16.39; p-0.003) and duration of work in the hospital (X^2=23.98; p-0.001) were statistically different between the nurses and the doctors who participated in the study. More nurses (16.5%) than doctors (6.0%) have spent more than 15 years in the hospital. However, the distribution of nurses and doctors at the different professional levels is not significantly different (X^2=5.73; p-0.057).

Attributes of and Barriers to Effective Patient Handover between Nurses and Doctors

About two hundred and twenty-five healthcare providers (56.2%) have had a form of training for patient handover in the past, as revealed in Table 2.

About 86.5% of nurses and a quarter of doctors in the study have had training in patient handover formally. This reflects a statistically significant difference (X2 = 148.73; p- 0.001) in the proportion of nurses who have been trained in patient handing over formally. Only 87.5% of doctors agreed that all patients should be included in handover notes, compared to 97.0% of nurses who feel the same way. Only 4 nurses (2.0%) agree with the 12.0% of doctors who believe that only newly diagnosed and critically sick patients should be handed over during shift or call changes. This difference was statistically significant (X2 = 15.59; p - 0.001). While more than a third of nurses agree that handover should be done with a properly formatted handover note, just slightly more than a tenth of doctors share this opinion, demonstrating a substantial difference in this attribute (X2 = 34.27; p - 0.001) (Table 2).

Concerning barriers to effective patient handover, nurses and doctors were not significantly different ($p>0.05$) in their perception of barriers except for fatigue for which more doctors (78.5%) than nurses (64.0%) believed that fatigue is a barrier to effective handover (Table 2).

Knowledge and Practice of patient handover among Nurses and Doctors

Knowledge and Practice of patient handover among Nurses: Most nurses (> 90.0%) agreed with the declarations that 'Ineffective communication at handover is a foremost cause of avoidable medical blunder', 'At handover report writing/taking notes is essential, as it gives details of the health status of each patients' and 'Report writing gives details about patients' health condition and with the verbal method, it is the best form of handover' (Table 3). As high as 14.0% of nurses disagreed with the declaration that 'Verbal handover methods is best apt for the sharing of pertinent facts about patient care/general ward issues'. Only 58.0% of nurses accept the assertion that 'Written handover note ensues improved patient safety and staff familiarity with patients. The last item testing the knowledge of the impact of effective handover on patient care also attracted the highest non-response (37.0%) from nurses.

Table 1. Sociodemographic characteristics of healthcare professionals in the study

Characteristics	Total N = 400 (%)	Nurses N = 200 (%)	Doctors N = 200 (%)	Chi-square	*p*value
Sex					
Male	147 (36.8)	22 (11.0)	125 (62.5)	114.10	0.001
Female	253 (63.2)	178 (89.0)	75 (37.5)		
Age group					
< 30 years	78 (19.5)	63 (26.5)	25 (12.5)	27.69	0.001
30 – 39 years	232 (58.0)	95 (47.5)	137 (68.5)		
40 – 49 years	79 (19.8)	50 (25.0)	29 (14.5)		
≥ 50 years	11 (2.8)	2 (1.0)	9 (4.5)		
Professional Cadre					
Junior Cadre	254 (63.5)	138 (69.0)	116 (58.0)	5.73	0.057
Intermediate Cadre	116 (29.0)	51 (25.5)	65 (32.5)		
Senior Cadre	30 (7.5)	11 (5.5)	19 (9.5)		
Total Number of service years					
1 – 5 years	100 (25.0)	53 (26.5)	47 (23.5)	16.39	0.003
6 – 10 years	162 (40.5)	72 (36.0)	90 (45.0)		
11 – 15 years	61 (15.3)	23 (11.5)	38 (19.0)		
16 – 20 years	43 (10.8)	27 (13.5)	16 (8.0)		
>20years	34 (8.5)	25 (12.5)	9 (4.5)		
Number of work years in this hospital					
1 – 5 years	245 (61.3)	119 (59.5)	126 (63.0)	23.98	0.001
6 – 10 years	82 (20.5)	28 (14.0)	54 (27.0)		
11 – 15 years	28 (7.0)	20 (10.0)	8 (4.0)		
16 – 20 years	43 (10.8)	31 (15.5)	12 (6.0)		
>20years	2 (0.5)	2 (1.0)	0 (0.0)		

Table 2. Attributes of and Barriers to Effective Patient Handover between Nurses and Doctors

Characteristics	Total N = 400 (%)	Nurses N = 200 (%)	Doctors N = 200 (%)	Chi-square	*p* value
Formal Training on handover					
Yes	225 (56.2)	173 (86.5)	52 (26.0)	148.73	0.001
No	175 (43.8)	27 (13.5)	148 (74.0		
Patients included in handover					
All patients	369 (92.3)	194 (97.0)	175 (87.5)	15.59	0.001
Only new patients and those diagnosed as critically sick	28 (7.0)	4 (2.0)	24 (12.0)		
Only critically ill patients	3 (0.8)	2 (1.0)	1 (0.5)		
Handover must be done with a well-laid-out handover note					
Yes	96 (24.0)	73 (36.5)	23 (11.5)	34.27	0.001
No	304 (76.0)	127 (63.5)	177 (88.5)		
Barriers to Effective Patient handover					
Lack of Time					
Yes	255 (67.3)	130 (65.0)	125 (62.5)	0.27	0.603
No	145 (36.3)	70 (35.0)	75 (37.5)		
Fatigue					
Yes	285 (71.3)	128 (64.0)	157 (78.5)	10.26	0.001
No	115 (28.7)	72 (36.0)	43 (21.5)		
Distraction					
Yes	235 (58.8)	118 (59.0)	117 (58.5)	0.01	0.919
No	165 (41.2)	82 (41.0)	83 (41.50		
Excess workload					
Yes	335 (83.8)	166 (83.0)	169 (84.5)	0.17	0.684
No	65 (16.2)	34 (17.0)	31 (15.50		
Defensiveness from a health worker					
Yes	143 (35.8)	79 (39.5)	64 (32.0)	2.45	0.118
No	257 (64.2)	121 (60.5)	136 (68.0)		
Communication style					
Yes	204 (51.0)	107 (53.5)	97 (48.5)	1.00	0.317
No	196 (49.0)	93 (46.5)	103 (51.5)		

Table 3. Knowledge of the Process and Content of patient handover

Declarations	Responses N = 200 (%)				
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Response
Ineffectual communication at handover is a foremost cause of preventable medical blunder	112 (56.0)	78 39.0)	5 (2.5)	5 (2.5)	0 (0.0)
A crucial component of handover is the transfer of information from an outgoing shift or call to an incoming one.	132 (66.0)	49 (24.5)	12 (6.0)	2 (1.0)	5 (2.5)
Writing reports/taking notes at handover are crucial since it provides information about each patient's health status.	108 (54.0)	79 (39.5)	10 (5.0)	3 (1.5)	0 (0.0)
Verbal handover is the best way for communicating critical information about patient care and general ward issues.	82 (41.0)	90 (45.0)	20 (10.0)	8 (4.0)	0 (0.0)
Writing a report provides vital information about patients' health conditions, and handing it out verbally is better.	126 (63.0)	60 (30.0)	11 (5.5)	3 (1.5)	0 (0.0)
Knowledge of the Impact of effective handover on Patient safety					
An essential element of patient handover is prioritizing the giving of care	67 (33.5)	105 55.5)	14 (7.0)	9 (4.5)	5 (2.5)
Lateness to work causes hurrying over the handover process and leads to ineffective communication	109 (54.5)	70 (35.0)	12 (6.0)	9 (4.5)	0 (0.0)
There should be a well-defined delineation of responsibility to ensure task coordination and accomplishment for each patient or group of patients.	46 (23.0)	111 55.5)	36 18.0)	2 (1.0)	5 (2.5)
Written handover note ensues improved patient safety and staff familiarity with patients	37 (18.5)	79 (39.5)	9 (4.5)	1 (0.5)	74 (37.0)
Practice with Patient handover information	Always	Some Times	Rarely	Never	Non Response
Handover information is routinely perused and updated regularly by a health worker during the shift/call	113 (56.5)	61 (30.5)	18 (9.0)	8 (4.0)	0 (0.0)
A frequent mode of handover is verbal communication, how often is the relayed information recollected	57 (28.5)	107 (53.5)	35 17.5)	1 (0.5)	0 (0.0)
Handover kick starts work schedules, are there specific gadgets to indicate the accomplishment of certain tasks	26 (13.0)	40 (20.0)	52 26.0)	77 (38.5)	5 (2.5)

Table 4. Response pattern to questions investigating knowledge and practice of Patients handover among Doctors

Declarations	Responses N = 200 (%)				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Non Response
Knowledge of Process and Content of patient handover					
Ineffective communication at handover is the foremost cause of avoidable medical blunders	112 (56.0)	83 (41.5)	5 (2.5)	0 (0.0)	0 (0.0)
Transfer of information from an outgoing shift/call to an incoming one is a fundamental facet of handover.	140 (70.0)	52 (26.0)	1 (0.5)	0 (0.0)	7 (3.5)
At handover report writing/taking notes is essential, as it gives details of the health status of each patient	90 (45.0)	87 (43.5)	22 (11.0)	1 (0.5)	0 (0.0)
Verbal handover methods are best apt for the sharing of pertinent facts about patient care/general ward issues	49 (24.5)	86 (43.0)	61 (30.5)	4 (2.0)	
Report writing gives details about patients' health conditions and the verbal method, is the best form of handover	108 (54.0)	70 (35.0)	22 (11.0)	0 (0.0)	0 (0.0)
Knowledge of the Impact of effective handover on patient care					
An essential element of patient handover is prioritizing the giving of care	93 (46.5)	95 (42.5)	9 (4.5)	0 (0.0)	13 (6.5)
Lateness to work causes hurrying over the handover process and leads to ineffective communication	102 (51.0)	88 (44.0)	10 (5.0)	0 (0.0)	0 (0.0)
There should be a well-defined delineation of responsibility to ensure task coordination and accomplishment for each patient or group of patients.	76 (38.0)	95 (47.5)	18 (9.0)	0 (0.0)	11 (5.5)
Written handover note ensues improved patient safety and staff familiarity with patients	76 (38.0)	85 (42.5)	14 (7.0)	3 (1.5)	22 (11.0)
Practice with Patient handover information	Always	Some times	Rarely	Never	NR
Handover information is routinely perused and updated regularly by a health worker during the shift/call	28 (14.0)	87 (43.5)	77 (38.5)	8 (4.0)	0 (0.0)
A frequent mode of handover is verbal communication, how often is the relayed information recollected	19 (9.5)	154 (77.0)	26 (13.0)	1 (0.5)	0 (0.0)
Handover kick starts work schedules, are there specific gadgets to indicate the accomplishment of certain tasks	2 (1.0)	27 (13.5)	59 (29.5)	106 (53.0)	6 (3.0)

Concerning practice, 87.0% of nurses would regularly peruse and update handover notes during their shift and about a third of them (33.0%) use specific gadgets that help indicate the accomplishment of certain tasks (Table 3). Item non-response rate among nurses was from 0.0% - 37.0% with a modal item non response rate of 2.5% (Table 3).

Knowledge and Practice of patient handover among doctors: Most doctors (greater than 95.0%) agree with the declarations that 'Ineffective communication at handover is a foremost cause of avoidable medical blunder', 'Transfer of information from an outgoing shift/call to an incoming one is a fundamental facet of handover'. And 88.0% of doctors accept that 'At handover report writing/taking notes is essential, as it gives details of the health status of each patients' and 'Report writing gives details about patients' health condition and with the verbal method, it is the best form of handover' (Table 4). As high as 30.5% of doctors disagree with the declaration that 'Verbal handover methods is best apt for the sharing of pertinent facts about patient care/general ward issues'. Seven in every ten doctors (70.5%) accept the assertion that 'Written handover note ensues improved patient safety and staff familiarity with patients. This item testing the knowledge of the impact of effective handover on patient care also attracted the highest non-response (11.0%) from doctors (Table 4). The declarations testing practice elicited poor responses from doctors, only 57.5% of doctors would routinely peruse and update handover information regularly. As high as 38.5% would rarely do this. About 7 in 10 doctors said they sometimes recollect relayed information during the verbal mode of handing over and only 14.5% of doctors have specific gadgets to indicate the accomplishment of certain tasks (Table 4). Item non-response rate among doctors ranged between 0.0 to 11.0%.

DISCUSSION

There were more female nurses than males. This is not shocking because it has been observed over time that more women than men prefer careers in nursing. The nursing profession is typically perceived as a "traditionally female occupation," or one in which women predominate. [8,9] The age distribution is statistically different for the professions. Absorption of nurses into the civil services tends to be in their younger years as their duration of professional training is very short than that required for doctors and thus they apply for jobs sooner. Medical doctors' years of training are longer and more intense, so they get government job placements in the later years of their lives. Consequently, the number of service years and duration of work in the hospital was longer for nurses than doctors, as also seen in this study. Nurses received training in handover, as part of their undergraduate education; however, the same does not obtain for doctors and this was evident in the study's results. This was similarly reported by Mukhopadhyay et al. [10] At least, eight out of every ten participating nurses in this study had formal training in handover unlike the participant doctors, which were at least two out of every ten. Many medical schools in industrialized nations like the UK and the USA have included "handover courses" as part of their curricula for educating and evaluating medical undergraduates.[11] Machaczek et al [6] in Czech, reported that47% of participating nurses had been formally trained on clinical handover compared to 12% of doctors. Different clinical handover methods exist. It may occur verbally, over the phone, via handwritten notes [12] or through the use of electronic devices. [13,14] The most prevalent and favoured type of handover is verbal, probably because it allows for a better two-way exchange of crucial information about patients' care, while there is currently a push in hospitals towards computerized handovers. [15] According to the study's findings, nurses before a shift change, consistently updated all handover documentation. On the other hand, medical physicians instead rely completely on verbal handover. Since memory falters, the safety of a patient is risked if information about a patient is communicated only through memory. [16]
Several reasons can obstruct effective clinical handover. [17] These include a lack of set frame work for handover, [13] overreliance on memory without reference to the written note, poor quality of written documentation due to illegible handwriting or omitted vital information, [8] chaotic environment, [18]and lack of time to prepare for it. [13]

According to this study, an excessive workload that results in a lack of time and fatigue from long work hours frequently causes healthcare personnel to share patient information poorly at handover. [6] Clinical handover was also hampered by distraction from the noisy environment. In this study, the obstacles to effective handover were comparable for both doctors and nurses, although doctors showed greater concern about weariness. In other to remove these roadblocks to this vital practice, firstly, a standardized structure for handover is needed to lessen the reliance on memory. [19]Additionally, if more personnel were employed, the patient-to-healthcare worker ratio would decline. As a result, the likelihood of experiencing work burnout will be reduced or completely avoided. Johnson et al, [20] asserted that clinical setting problems implicitly involve flexible handover techniques, especially when considering nurse teamwork. In this study, nurses and doctors did not significantly differ in the obstacles to effective handover, however, doctors indicated greater concern about weariness than did nurses. A plausible explanation for this is the fact that there were much more doctors than nurses for every patient in the hospital. As a result, a doctor is required to care for far more patients than a nurse. According to a similar study, these characteristics cause these doctors to put in more hours. [6] Updating clinical notes for handover is a good practice as patients' clinical states change over time while hospitalized. In this study, more than half of the participants updated their handover notes as shifts/call progressed. However, this action was done more significantly by the nurses (87 %). The fact that nurses are the ward's "managers" in the first place could be the cause of this.

Second, they observe changes in patient health before doctors do because they are stationed in the wards. Slightly above half the doctors in this study (57.5 %) would update their clinical notes for handover while they were at work. Doctors' workload, lack of training on the importance of these patient written updates or confidence in their abilities to commit patient information to memory may be contributory factors. Bhara et al [21] reported that verbal handover only was a very poor method for handover and that going without documentation was a risky move. According to the study, the printed sheet supported 99% of the information being kept in the simulated handover, however, it was noted that this was dependent on the printed page being updated appropriately. Verbal communication and the transfer of written reports are crucial tools in the management of patients. [6]Our study's findings confirm this stance. The best handover tool for the nurses who took part in the study is a set of well-written notes.

Slightly above one-third of the nurses (33%) practiced handover with the use of electronic gadgets, unlike doctors who were slightly above one-tenth (14.5%). The sheer volume of writing involved in handing over is enormous, therefore doctors do not practice this. To surmount this, many nurses would much rather send an electronic message signaling completion of a task or outlining the patient's current condition to lessen the stress of completing these handover reports. To facilitate workflow and service delivery and let the handoff process move more smoothly, electronic gadgets have been promoted. [19,22] Despite these advantages, there are differing opinions on how to employ them. [6,23,24]

Conclusion

The healthcare professional is saddled with the responsibility of a proper clinical handover for sustained optimum patient care. The formal training of physicians in clinical handover is insufficient. Clinical handover obstacles can be caused by both individual and workplace issues. In terms of knowledge and patient handover procedures, doctors and nurses appear to defer from one another. Nurses typically favour verbal communication in addition to handover paperwork. For the handover of patients, many clinicians might be depending more on recollection.

Recommendation

To improve handover content and communication, the handover should be incorporated into the training curriculum for nursing and medical students. Those who are currently working should also receive regular updates on knowledge and practice regularly. All newly hired nurses and doctors must complete mandatory training in patient handover.

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