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Assessment of Factors Affecting Discharge Planning Implementation in a Ghanaian Hospital

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Abstract

Background: Discharge from a hospital does not mark the end of care or indicate the cure of disease; thus, care must continue at home to maximize health gains made during hospitalization. Discharge planning implementation (DPI) ensures conterminous care after discharge, and understanding the factors that affect clinical staff's compliance with DPI may improve clinical practice. This study aimed to assess the factors affecting DPI compliance in Margaret Marquart Catholic Hospital. **Method:** In this study, 112 clinical staff and 281 discharged adult patients/relatives were purposively sampled and interviewed in enclosed settings. Structured questionnaires and a data extraction tool were used to collect data from participants and documentary review. The mean/median of each variable was used as a dividing line to split the variables into positive and negative scores. A square test was performed for an association and logistic regression for the strength of association. **Results:** The majority (57%) of the staff complied to discharge planning implementation but few patients (43%), received DPI. Of all the factors, hospital system (OR = 3.57, p = 0.02, 95%CI: 0.20, 2.37), the absence of discharge policy and patient health literacy affected DPI compliance. **Conclusion:** Improving staff compliance requires coordination of system-wide discharge policy implemented by hospital managers demonstrating DPI as a priority to serve patients/families with regard and willingness to wait for discharge planning execution.

Keywords

Discharge Planning, Hospital Readmission, Continuity of Care

1. Introduction

Discharge from a healthcare facility does not mark the cure of a disease or the

end of a patient's need for care. Instead, it marks a crucial transition period in which the health improvements achieved during hospitalization must be promoted, if possible, or at the very least maintained. This phase is essential in ensuring that patients continue to recover, manage their conditions, and avoid complications that could lead to readmission [1]-[4]. So, discharge planning was designed to help patients meet their post-discharge care needs [1]-[3]. However, for some patients—particularly older adults and those with chronic illnesses—this expectation is often unmet despite the presence of discharge planning due to fragmented care resulting from poor discharge planning implemented for patients [4]-[6].

1.1. Components of Discharge Planning

Discharge Planning (DP) is characterized by its individualized nature and phased approach, starting from admission assessment through in-patient assessment and preparing a discharge plan tailored to each patient's needs [7] [8]. DP is crucial in preparing patients and their families for the post-discharge period. A well-structured discharge process is key to achieving positive patient outcomes [9] [10]. One of the most important components of this process is patient and caregiver education [10]. Patients must understand their condition, prescribed medications, dietary restrictions, and any necessary lifestyle modifications [1] [7] [9]. Educating caregivers on how to provide adequate support is equally crucial, as they often play a significant role in assisting with medication management, mobility, and daily activities [11]. However, studies have identified deficiencies in discharge practices worldwide, contributing to fragmented care and a hospital readmission rate of approximately 1 in 5 patients [12] [13].

Another essential aspect of a successful transition from hospital to home is coordination with primary care providers and home health services [4] [10] [14]. Proper follow-up with physicians, specialists, or rehabilitation services ensures continuity of care and minimizes the risk of health deterioration [10] [15]. A clear discharge plan should include scheduled follow-up appointments and contact information for healthcare professionals who can address any concerns that may arise.

Medication reconciliation is also a vital step in the discharge process [16]-[18]. Healthcare providers must review and adjust medications as needed to prevent errors, adverse drug interactions, or non-adherence. Clear instructions on dosages, timing, and potential side effects help patients adhere to their medication regimen, thereby improving health outcome [18].

Additionally, arranging for necessary support services is crucial for many patients, particularly those with mobility challenges or complex medical needs [1] [19]. Home health services, physical therapy, or access to medical equipment can significantly enhance a patient's ability to recover comfortably and safely at home. Social support systems, including family members and community resources, further contribute to the patient's well-being during this transition.

1.2. Factors that Affect Discharge Planning Implementation

Various factors emanating from the health system, hospital, and patient characteristics affect how DP is implemented, all of which are assessed in detail in this study [2] [10]. The health system is responsible for designing the discharge policy, defining what set of activities constitutes discharge planning [7]. It also establishes communication channels between facilities in the system and designates staff for implementing discharge planning activities [9]. In Ghana, nurses are responsible for preparing patients for discharge, home visiting, and educating patients on their medications during discharge [20] [21].

Previous studies have identified workload, staffing, supervision, resource availability, communication culture, and training as hospital-level factors that affect DPI [4] [14] [18].

Patient characteristics such as language differences with staff, willingness to wait for discharge preparation, and regard for DP are some of the factors previous studies have identified to affect DPI [22]-[24].

1.3. The Discharge Situation in Ghana (The Problem)

In Ghana, though there is no published evidence of readmission rates and post-discharge complications, readmissions within 30 days are commonly observed in hospital wards. Additionally, there is no published evidence directly linking these readmissions to discharge planning, but it is widely acknowledged that discharge in most Ghanaian hospitals simply means "letting the patient go". The discharge process often consists only of physical preparations, such as the removal of cannulas and catheters, with minimal emphasis on patient education or comprehensive post-discharge care. Most patients are sent home with their prescribed medications without sufficient guidance on proper usage, potential side effects, and necessary follow-up care. Often, clear instructions on self-care are not given, assessments of foreseeable needs are not done, and self-management is not planned with the patient or family. This lack of structured discharge planning may contribute to poor health outcomes and higher rates of readmission, as observed from research in other settings.

The Ghana health service mandates nurses to implement discharge planning for patients as spelled in the standard nursing procedure manual [21]. Despite this, evidence regarding the compliance of clinical staff with discharge planning implementation and its associated factors in Ghanaian hospitals still needs to be assessed, albeit it was estimated that about 24% of discharged patients did not receive comprehensive discharge planning in Margaret Marquart Catholic Hospital in 2015. Exploring the key activities staff perform during discharge planning, the proportion of patients who receive/proportion of staff who implement discharge planning, and the factors that affect discharge planning will establish a foundation of evidence for improvement of DP in a Ghanaian hospital.

To date, no study has gathered evidence on whether staff complies with implementing discharge planning for patients, what they do during discharge planning

(activities that constitute discharge planning in practice), or the factors that affect discharge implementation in Ghanaian hospitals. To fill this gap, this study was conducted to gather evidence on discharge planning implementation in Margaret Marquart Catholic Hospital (MMCH).

1.4. Objectives of the Study

This study aimed to assess the factors affecting compliance with discharge planning implementation MMCH. Specifically, the objectives were to:

1) Identify the discharge planning practice in MMCH;

2) Determine the hospital/health system factors that affect discharge planning implementation (DPI);

3) Describe the health system factors that affect DPI compliance;

4) To identify the patient factors that affect DPI compliance.

2. Methods

This study utilized a cross-sectional design, employing a quantitative approach to examine hospital, health system, and patient-related factors influencing provider compliance with discharge planning implementation. The study targeted clinical staff and adult discharged patients from May 29 to June 15, 2017.

This research was conducted at MMCH, the district hospital of the Kpando municipality of Volta Region, Ghana. It has a capacity of 163 beds and had an average annual admission of 8480 patients in 2016. MMCH, one of the two admission hospitals in the municipality, offers a wide range of services, making it a suitable setting for the study.

Kpando municipality has both urban and rural areas, and the residents are of different ethnic groups, although Ewe is the dominant language.

2.1. Sample Size Calculation

2.1.1. Clinical Staff

Sample sizes for staff and patient respondents were determined using the Yamane and sample size for single proportion calculation formulae, respectively. These sample size formulae used were based on literature [25]. The clinical staff population of the hospital was finite, and the patient population was infinite. As a result, these formulae were appropriate for calculating the sample size of various respondents of this study.

The total clinical staff population size (N) of MMCH = 150. At 95% confidence interval, alpha level (e) = 0.05

Per the Yamane formula, sample size needed (n) = N/1 + N.e^2 Therefore n = 150/1 + 150. $(0.05)^2$ = 110

In all, 120 staff were recruited to make up for incomplete questionnaires.

2.1.2. Discharged Patients

Discharged patients size needed

(n) = (z^2pq)/d^2

From the problem stated for this study,

P = 0.24, q = 0.76, at a 95% confidence level z is 1.96 and $\alpha = 0.05$

$n = (1.96)\ 2 \times (0.24 \times 0.76)/(0.05)^2$

So n = 281

In all, 308 patients were sampled to cover for incomplete questionnaires.

2.2. Data Collection Tools

The researcher and his assistant collected data from clinical staff and discharged patients using separate questionnaires for each group and a data extraction tool to assess other health system factors that affect DPI. The questionnaires primarily consisted of Likert scale items, with responses ranging from strongly disagree to strongly agree, to which we assigned numerical values for analysis.

2.3. Data Collection Procedure

The researcher individually approached clinical staff on duty, inviting them to participate in the study. Those who agreed signed a consent form before completing the questionnaire independently.

For discharged patients, we stationed ourselves at ward entrances, approaching each patient and their family individually. Participants received detailed study information before signing the consent form. To ensure privacy, they completed the questionnaire in an enclosed space outside the ward. Patients could fill out the questionnaire themselves or have it read aloud in English. If needed, a research assistant fluent in Ewe provided translation. Patients who did not understand English or Ewe were excluded.

Additionally, we conducted a documentary review of official records and hospital documents to gather data on discharge practices at both the hospital and municipal health directorate levels.

2.4. Data Processing and Analysis

All questionnaires were checked for completeness and given identification numbers for future tracking. The researcher entered data from 120 staff and 292 patient questionnaires into the Stata 14 version as separate data sets and cleaned them. After cleaning the missing items, the researcher retained 112 staff and 281 patient observations for analysis.

Before analysis, negatively worded items were reversed so that strongly disagree scored (5), disagree (4), neutral (3), agree (2), and strongly agree (1). These new values for those items were then entered and used for the analysis instead of the original values attached to each response. Positively worded items retained their original values: strongly agree (5), agree (4), neither (3), disagree (2), and strongly disagree (1). The age of patients was categorized into Adults (18 - 69 years) and the elderly (70 years or older).

The items were then sorted into their respective constructs, representing the study's variables. To ensure reliability and validity, alpha reliability and skewness

tests were conducted for each variable. From this stage, the total scores, mean, and median values for each variable were appropriate. The mean or median was used as a reference point to determine whether a variable had a positive or negative score. Variables with scores above the mean or median (depending on their appropriateness) were categorized as positive, while those with scores below the mean or median were categorized as negative.

To analyze the relationships between variables, Chi-square tests were conducted to assess associations between discharge planning implementation (DPI) compliance and the independent variables. Logistic regression analysis was performed to further examine the predictive relationships of variables that exhibited statistically significant associations in the Chi-square tests.

2.5. Ethical Considerations

The Ghana Health Service (GHS) Ethics Review Committee gave ethical approval for the study, and the Kpando Municipal Health Directorate and MMCH management gave permission. Participants provided voluntary consent, with procedures in place for withdrawal without penalty, and data confidentiality and privacy were maintained throughout the study.

3. Results

3.1. Socio-Demographic Characteristics and Professional Experience of Clinical Staff

For this study, we interviewed 112 clinical staff in Margaret Maquart Catholic Hospital (MMCH). About 63% (70) of the clinical staff were females. Most of the clinical staff, 60.7% (68), were between the ages of 26 and 32 years, and more than half (55.4%) of them were registered nurses (Table 1).

Table 1. Sociodemographic characteristics of staff.

Characteristic	Frequency (%)	Characteristic	Frequency (%)
Age (years)		**Units ever Worked**	
19 to 25	28 (25)	1 - 2	69 (61.61)
26 to 32	68 (60.71)	3 - 4	25 (22.32)
33 to 39	9 (8.04)	5 - 6	10 (8.93)
40 to 46	2 (1.79)	7 - 8	8 (7.14)
47 or >	5 (4.46)	**Current Unit**	
sex		OPD***	10 (8.93)
Male	42 (37.5)	Theatre	12 (10.71)
Female	70 (62.5)	Maternity	16 (14.29)
Profession		Medical	18 (16.07)

Continued

Registered Nurse*	62 (55.36)	Children	20 (17.86)
Doctor	4 (3.57)	RCH/ANC	9 (8.04)
Enrolled Nurse	20 (17.85)	Surgical	14 (12.5)
Pharmacist/Technician	4 (3.57)	Pharmacy***	13 (11.61)
Midwife	15 (13.39)	**Tenure in Unit**	
CHN/Nutritionist*	7 (6.25)	<1 year	42 (37.5)
Rank		1 - 3 years	50 (44.64)
Rotation	25 (22.32)	4 - 6 years	13 (11.61)
SN**	70 (62.5)	7yrs or >	7 (6.25)
NO	12 (10.71)		
PNO	5 (4.46)	**Working hrs/Week**	
Tenure in Hospital		<20 hours	3 (2.68)
<1 year	34 (30.36)	20 - 39 hours	15 (13.39)
1 - 5 years	61 (54.46)	40 - 59 hours	73 (65.18)
6 - 10 years	11 (9.82)	60 - 79 hours	10 (8.93)
11 - 15years	2 (1.79)	80 - 99 hours	9 (8.04)
16 years or more	4 (3.57)	100 hours or more	2 (1.79)

Many of the staff, 77.68% (87), were nurses of three cadres (registered, enrolled, and community health nurses) and occupied the ranks of staff nurses, with about one-fifth of the nurses also occupying rotation or internee ranks (Table 1). The clinical staff worked in 7 units, and many of them worked in the children 17.7% (20), medical 16.1% (18), maternity unit 14.3% (16), with the antenatal clinic, reproductive and child health having the least number of staff (Table 1). The majority (54.46%) of the staff had 1 to 5 years of work experience in the hospital, and 61.61% had worked in 1 to 2 units of the hospital. Most staff had less than one year and 1 to 3 years (37.5% and 44%, respectively) of experience in their current units. On average, staff worked 40 to 59 hours weekly, although a few (8.04%) worked up to 80 to 99 hours weekly.

3.2. Enabling Factors of Discharge Planning in MMCH

The first step in data analysis was to determine the total, mean, and median scores for each factor influencing discharge planning (DP). This analysis helped identify factors that staff perceived as either enabling or hindering their ability to implement DP (see Table 2).

A significant majority (88%) of staff reported that their patients understood the primary languages spoken in the hospital (English and Ewe), making language an

enabling factor for discharge planning implementation (DPI). Additionally, 63% of staff indicated that intra-hospital communication, teamwork, and hospital system support facilitated their efforts in preparing patients for discharge.

However, the study also highlighted areas needing improvement to enhance DPI. Workload and staffing were major concerns, with only 42% of staff expressing satisfaction in this area. Furthermore, 49.1% of staff held a negative perception of discharge planning at MMCH.

Table 2. Factors affecting discharge planning implementation.

Variable	% positive response score	% negative response score	Mean score	Median score	SD
1) Hospital-Primary Caregiver (PC) Communication	58.93	41.07	13.66	14	2.11
2) Intra-Hospital Communication	63.39	36.61	13.97	14	1.90
3) Hospital System support	63.39	36.61	7.25	8	1.13
4) Supervision	58.93	41.07	12.87	13	2.24
5) Follow-up appointments	52.68	47.32	6.82	7	1.23
6) Assessment	53.57	46.43	12.38	13	1.6
7) Staff perception	50.87	49.11	9.48	10	1.64
8) Workload and Staffing	41.96	58.04	8.46	8	1.36
9) Availability of PC	58.93	41.07	6.50	7	1.25
10) Client Education	61.61	38.39	6.84	7	1.20
11) Staff-patient communication	57.14	42.86	10.69	11	1.30
12) Discharge planning Initiation Day	53.57	46.43.	5.48	6	0.83
13) Availability of material	57.14	42.86	3.39	4	0.78
14) Patient Attitude	59.82	40.18	6.15	6	0.66
15) Patient Language	87.50	12.50	2.69	3	0.69
16) Discharge Planning Implementation Compliance	57.14	42.86	6.54	7	1.54

3.3. Discharge Planning Implementation Compliance

The second step of the data analysis was to determine the proportion of staff who implement discharge planning for their patients and how staff in different units and ranks perceived the general discharge situation in MMCH.

The mean score of DPI compliance was 6.5, and 57% of the 112 staff surveyed scored above the mean. Although the compliance score was generally positive, compliance varied between male and female staff and among the various units. Although most (73.4%) of the staff members who indicated they complied with DPI were females, the association between the sex of staff to DPI compliance was not statistically significant. Among the units, the maternity ward accounted for

much of the hospital's overall DPI compliance score, contributing nearly 22%, with almost 88% (14) of the staff in that unit indicating they regularly complied with DPI in this study. In contrast, despite the children's ward having the most staff, it contributed 12.5% of the hospital's overall DPI compliance, and 40% (8) of the staff there complied with DPI.

3.4. Discharge Planning Practice in MMCH

The Third aspect of the data analysis was to identify the activities staff perform when implementing discharge planning for patients in MMCH.

A total of eight key activities (Table 3) were identified as essential components of Discharge Planning Implementation (DPI) at MMCH. The maternity ward implemented a ward-based health talk program to educate and instruct clients, while other wards followed standard discharge procedures.

Table 3. Key activities identified as discharge practice.

Key activity	Frequency	Percent (%)
Client education	90	80
Follow-up appointment	64	57
Ensure clients pay bills	52	46
Documentation	41	37
Inform and discuss discharge with client/family	35	31
Instructions	18	16
Assessment of post-discharge care needs	4	3.6
Physical preparations	41	37

Among these activities, client education was the most frequently performed, with 80% of staff engaging in it more than any other activity. Additionally, 57% (64 staff) regularly scheduled follow-up appointments for patients, while 46% (52 staff) prioritized ensuring that clients settled their bills.

Physical preparation and administrative documentation were performed by 37% (41 staff members), including tasks such as removing cannulas, collecting medications, and recording patient details. Only 31% (35 staff members) actively informed and engaged patients and their families in discussions about discharge and post-discharge life.

Assessment of anticipated needs was the least performed activity, with only 3.6% of staff engaging in it. Furthermore, less than one-sixth (16%) of staff provided patients or their relatives with instructions regarding post-discharge activities, limitations, or the use of medical and supportive devices.

3.5. Staff Perception of Discharge Situation at MMCH

Another aspect of the data analysis was to assess how staff consider the discharge

situation in the hospital. Staff were asked to grade the overall hospital's discharge situation on a scale from excellent to failing. The majority of staff rated the hospital's performance as acceptable. Specifically, only 3.57% of staff scored it as excellent, while 38% rated it as very good and 47% as acceptable. However, 11% of staff scored it as poor. Most staff who rated the hospital's performance as excellent were from the surgical ward and two non-admission units (ANC/OPD). Conversely, a majority of staff who rated the hospital's performance as poor came from admission units. The overall score for staff perception of the discharge situation in the hospital was 51%, which reflects reality.

When staff were asked to grade the discharge planning implementation in their respective units and give the unique context of the unit that facilitates or hinders DPI, the results were varied (Figure 1). Generally, many staff in admission wards perceived the discharge situation was better than those in non-admission units (Figure 1). However, within the four admission wards (medical, surgical, maternity, and children wards), many staff, 81% (13), in the maternity unit indicated that discharge planning was always implemented for patients. One unique feature of the maternity ward was that it used a ward-based health talk program to educate and instruct clients, whereas the other wards used usual one-on-one patient education during discharge. Comparatively, the proportions of staff in the rest of the admission wards who perceived the discharge situation in the hospital as positive were relatively smaller with 64% (9), 45% (9), and 39% (7) being the staff of surgical, children, and medical wards, respectively.

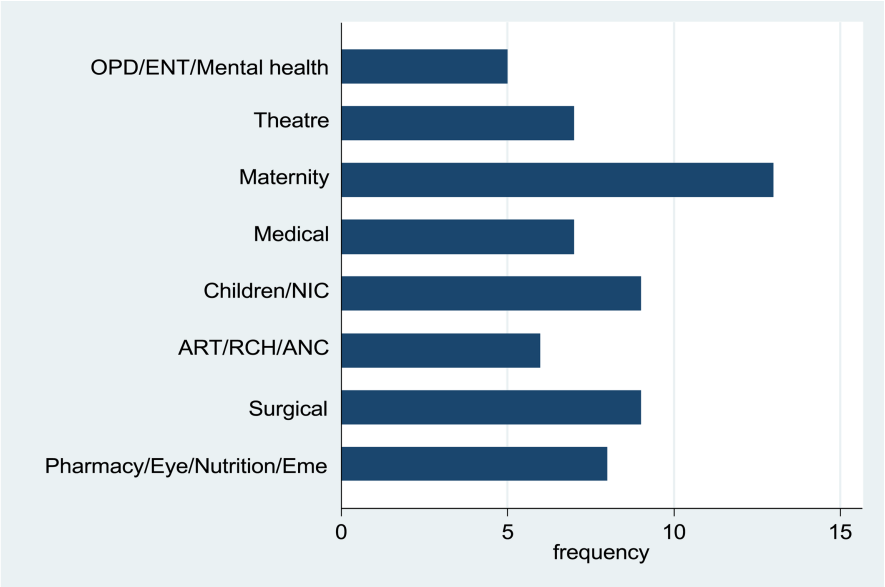

Figure 1. Bar chart showing staff grading of the discharge situation in the various units.

Further, the data analysis was to determine the association between Discharge Planning Implementation (DPI) and the various hospital and health system factors.

3.6. Hospital Factors Associated with DPI Compliance

3.6.1. Hospital-Primary Caregiver Communication

Of the 112 clinical staff surveyed, 59% (66) communicated effectively with primary caregivers (PC) in the peripheries of Kpando municipality by sending discharge notes through the patient/relatives. These staff also included a contact person's phone number to build a channel for feedback and shared some patient care data, such as diagnosis with the PC. Among the 66 staff who communicated effectively with PC, 68% (45) complied with DPI. In contrast, a few (41%) of the staff who did not communicate effectively with PC also complied with DPI. The Chi-square test showed a statistically significant association between DPI and hospital-primary caregiver (such as community health nurses) communication ($\chi^2 = 7.80$, $p = 0.01$).

3.6.2. Intra-Hospital Communication and Teamwork

Furthermore, 63% (71) of the clinical staff indicated that they often communicate with other departments (intra-hospital communication) and work as a team (teamwork) within their unit when preparing a patient for discharge. These staff members indicated they regularly contacted and gave feedback to other clinicians about patient discharge and demonstrated cooperative teamwork whenever a patient needed multidisciplinary discharge planning activities.

This result indicates that communicating effectively within the hospital and teamwork was associated with DPI compliance, and the association was statistically significant ($\chi^2 = 11.16$, $p \leq 0.01$).

3.6.3. Hospital System Support

Seventy-one (71) respondents, representing 63% of the clinical staff, indicated that the hospital system was supportive of DPI, and of this number, close to 75% (53) also complied with DPI. In comparison, only approximately 27 % (11) of the 41 respondents who indicated the hospital system needed to be more supportive of DPI complied with DPI. A supportive hospital system was associated with DPI compliance ($\chi^2 = 24.27$, $p \leq 0.01$).

3.6.4. Supervision

In the area of supervision on DPI, 59% (66) of the staff indicated that they received adequate supervision on DPI. Supervisors of these staff asked for a written or verbal report on DPI. The supervisors of these staff also complimented them whenever a patient was discharged according to standard procedure and did not overlook shortcut discharge practices. The majority (73%) of the staff who received this kind of supervision routinely compiled to DPI. However, only 35% (16) of the 46 staff who were not supervised effectively on discharge practice complied with DPI. Compliance with DPI was associated with effective supervision, which was statistically significant ($\chi^2 = 15.94$, $p \leq 0.01$).

3.6.5. Predictive relationships between Hospital Factors and DPI Compliance

Out of the seven hospital factors regressed against DPI compliance, three were

found to have a significant association with DPI compliance (Table 4). Clinical staff who worked in supportive environment or perceived the hospital system as supportive had more than three and a half times higher odds of complying with DPI compared to those in an unsupportive hospital system, after adjusting for all other hospital factors (AOR = 3.57, p = 0.02, 95% CI: 0.20, 2.37).

Table 4. Predictive relationships between hospital factors and DPI.

Factor	AOR	p-value	95% CI
Hospital-pc communication and coordination (Uncoordinated/Coordinated)	Ref 1.39	0.52	0.51, 3.78
Intra-hospital communication and teamwork (Ineffective/Effective)	Ref 1.61	0.4	0.54, 4.83
Hospital system support (Unsupportive/Supportive)	Ref 3.61	0.02	1.22, 10.65
Supervision (Ineffective/Effective)	Ref 2.61	0.06	0.97, 7.01
Assessment (Not Done/Done)	Ref 0.94	0.91	0.34, 2.63
Staff-patient communication (Ineffective/Effective)	Ref 2.68	0.05	1.01, 7.12
Staff perception (Negative/Positive)	Ref 2.63	0.05	1.00, 2.92

Similarly, staff members who demonstrated effective communication with patients had significantly higher compliance with DPI. After adjusting for other factors, staff in the effective staff-patient communication group had more than two and a half times higher odds of complying with DPI compared to those in the ineffective staff-patient communication group (OR = 2.68, p = 0.05, 95% CI: 1.01, 7.12).

Additionally, staff members who held a positive perception of the discharge process were more likely to comply with DPI. Compared to those with a negative perception, staff with a positive outlook on discharge had more than two and a half times higher odds of complying with DPI (OR = 2.63, p = 0.05, 95% CI: 1.0, 6.92), even after adjusting for all other hospital factors.

3.7. Health System Factors

A review of all discharge-related documents indicated that there was no discrete discharge policy statement in Ghana. The documents reviewed indicated that discharge planning implementation was integrated into the core duties of nurses. With regards to the design of the discharge policy, it was found that the N&MC procedure manual and the component task for nurses are the only documents that spell out the activities staff needs to carry out during DP. These activities were

patient education, physical preparation, documentation, follow-up appointments, and assessments.

At the Kpando Municipal Health System level, five (5) health system factors - two (2) primary care-related and three (3) policy-related- were explored. All the factors except the availability of CHPS compounds were included in the staff survey to examine the impact of each factor on staff compliance with DPI. Of the 112 clinical staff surveyed, 46% (51) reported the absence of a DP policy as the most critical reason for non-compliance to DPI. In addition, 33% (37) and 21% (24) of the clinical staff attributed DPI non-compliance to the non-designation of responsibility for discharge and the design of the discharge process, respectively. This means the absence of a system-wide discharge policy explained 46% of the DPI non-compliance in MMCH. Also, 33% and 24% of the non-compliance was due to the non-designation of responsibility and the design of the discharge process, respectively.

On primary caregivers' availability, the municipality had 56 Community Health Nurses (CHN), 1 Public Health Nurse (PHN), and 7 Technical Officers in the frontline of primary care service provision. CHNs are supposed, as part of their duty, to give follow-ups to discharged patients at the community level in Ghana. The municipality had a CHN-to-population ratio of 1:1113 and a CHPS compound-to-population ratio of 1:12,464. This CHN-to-population ratio is higher than the national average ratio of 1 to 3 CHNs per 1 CHPS compound per 5000 populations. Regarding the effect of primary caregiver (PC) availability on DPI compliance, most of the staff (59%) indicated that PC was available, and as a result, it did not restrict DPI compliance. There was no significant association between discharge planning implementation compliance and primary caregiver availability ($\chi^2 = 0.97$, $p = 0.78$).

3.8. Patient Factors

3.8.1. Socio-Demographic Characteristics of Patients

The majority, 58.36% (164), of the 281 discharged patient participants lived in rural communities, and 70.46% (198) were females (**Table 5**). Nearly 94% (263) of the respondents were adults aged between 18 and 69 years. More than half (56.23%) of the patients/relatives interviewed were married, and 40.21% were vocational workers. Most (48.75%) of the patients were junior/senior high school-level educated. There was at least one (1) primary healthcare facility in or near the communities of most (61.57%) of the patients. Compared to the accepted average of 5km distance clients are expected to travel to access primary care, most clients (53.02%) needed to travel relatively shorter (less than 5 km) from their homes to access primary care service.

3.8.2. Proportion of Patients who Receive Discharge Preparation at MMCH

More than half (56.94%) of the 281 patients/relatives who participated received physical preparation such as removal of cannula and basic instructions on their medication, such as the number times the patient needs to take their medicines,

but comprehensive discharge planning implementation (DPI). These patients/relatives could not tell their diagnosis and what medications they were taking home and did not also know what they would do when a problem arose.

Table 5. Demographic characteristics of clients.

Characteristic	Frequency (%)	Characteristic	Frequency (%)
Age		**Educational Level**	
18 to 69 years	263 (93.59)	No Education	37 (13)
70 years or more	18 (6.41)	Primary/Junior High School	137 (49)
Sex		Senior High School	81 (29)
Male	83 (29.54)	Tertiary	26 (9)
Female	198 (70.46)	**Marital Status**	
		Married	158 (56)
Proximity to a clinic		Single	78 (28)
Less than 5 km	149 (53.02)	Widowed	31 (11)
5 km	46 (16.37)	Divorce	14 (5)
More than 5 km	86 (30.6)	Occupation	
		Professionals	18 (6.41)
Area of Residence		Vocational workers	78 (27.76)
Rural	164 (58)	Farmer/Other Manual workers	113 (40.21)
Urban	117 (42)	Student/aged	72 (25.62)

3.8.3. Patient Factors Affecting Discharge Planning Implementation (DPI)

1) Health Literacy and Willingness to Wait

Among the patients and relatives who did not receive DPI, the majority (66.88%) were unwilling to wait 30 minutes or more on discharge day for discharge preparations. Additionally, 75.63% (121) had low health literacy scores. In contrast, the clients and relatives who received DP demonstrated a positive attitude toward discharge, meaning they were willing to wait and considered DP necessary, and they also had high health literacy scores. However, the proportion of individuals who did not receive DPI varied across wards, with the highest rates in the children's ward and the lowest in the maternity unit. More than half (51.67%) of patients admitted to the children's ward and 21.54% admitted to the maternity ward indicated they were not receiving DPI. The Chi-square test revealed that the association between discharge planning implementation compliance and both patient health literacy and willingness to wait was statistically significant ($\chi^2 = 4.15$, $p = 0.04$; $\chi^2 = 9.35$, $p < 0.01$).

2) Consideration for discharge preparation

The majority, 90.75% (255), of the patients regarded DP as important; of this

number, 56.47% (144) received DPI. However, 42.30% (11) of the patients who did not regard DPI as important received DPI. Receiving DPI was also significantly associated with the patient/family's regard for discharge planning (DP) ($\chi^2 = 9.35$, $p \leq 0.01$).

4. Discussion

4.1. Discharge Practice in MMCH

The findings of this study suggest that discharge activities in the hospital are in line with the activities outlined in the component task of the Nursing and Midwifery Council (N&MC) of Ghana as a discharge procedure, albeit to a certain degree [20]. Despite most patients/relatives receiving limited information on their medications, staff downgraded crucial activities intended to enable patients/relatives to enact self-care at home, such as providing the patient/relatives instructions on what to do or avoid because of one's condition (activity and limitations). Similarly, activities intended to identify patient/family anticipated self-care needs, such as home care needs assessment, were not prioritized during discharge planning implementation.

A possibility for these results, as identified by past research, is that an assessment of a patient's needs and their condition is based on medical treatment and perception of discomfort [26]. Alternatively, it is known that supervision can determine what tasks are prioritized in clinical settings [27]. This means supervision might contribute to the relegation of instructions and home care needs assessment to less critical activities by staff of MMCH, as found in the present study [24] [27].

Somewhat surprisingly, but as found in another study, in this study, staff attached more attention to non-clinical activities, such as ensuring that clients pay bills and removing cannulas and documentation, than clinical activities [24]. This finding matches the findings of past studies that nurses dedicate themselves more to administrative activities than clinical care activities [28]. However, different studies have found that nurses preferred the medical model, where they concentrated on carrying out advanced procedures, to the care model, where the staff was engaged in care activities such as physical preparation and documentation [24] [29].

Another finding of the present study is that the discharge was not often planned before discharge day, but patients were prepared on the day of discharge, similar to the findings of a previous study [28]. Depending on the findings of Jooste *et al.*, 2010 the majority of nurses do not appreciate the need for the nursing process; it could be explained that staff in this study thought they could implement discharge preparation without planning it [30]. An additional explanation for this finding is based on the fact that institutional structures affect nurses' compliance with the nursing process [31]. Another explanation could also depend on studies that have established that staff are likely to compromise compliance when faced with a heavy workload [22] [32]. Specifically, when there are many patients for fewer staff to handle, staff tend to concentrate on finishing the work rather than adhering to procedures, especially if the procedure is less likely to harm the patient im-

mediately; thus, the under-staffing and heavy workload in the hospital do not enable the planning of discharge [33]-[35].

4.2. Discharge Planning Implementation (DPI)

A review of DPI compliance results from this study revealed a significant gap between staff-reported practices and patient experiences. While 57% of staff indicated that they regularly prepared patients for discharge, 43% admitted they did not consistently engage in discharge preparation.

From the patients' perspective, only 43.1% reported receiving discharge preparation, while the majority—56.9%—stated they did not receive any DPI. This discrepancy suggests that even though many staff members believe they are implementing discharge planning, a substantial number of patients are not benefiting from it.

A possible explanation for this discrepancy is the difference in perception between staff and patients regarding what constitutes discharge planning. Staff may consider performing certain discharge-related tasks as sufficient DPI implementation. However, from the patient's perspective, it is not just individual tasks but the comprehensive process—one that equips them with the knowledge and skills for self-management and a clear understanding of their condition—that truly signifies they have received DPI. These findings are similar to the findings in which it was found that the majority of the clients expressed poor comprehension of instructions after discharge, and many nurses did not implement discharge preparation [18] [36] [37].

4.3. Factors Associated with Discharge Planning Implementation (DPI) Compliance

4.3.1. Hospital Factors

Staff compliance to implement DP was contingent on a supportive hospital system, effective staff-patient communication, and positive staff perception of discharge. Evidence from this study also indicates that the likelihood of staff complying with implementing DP may increase by more than two and a half times in the presence of the above factors. For example, the majority (88%) of the staff in one ward (maternity ward) complied with DPI when the DP activities were simplified, sorted, and assigned to individual staff as part of their schedule for a shift (i.e., supportive hospital system).

These findings are in line with the results from a different study in which it was found that institutional structures affect the implementation of the nursing process [22]. Similarly, these findings tally with the findings that staff perception and experience influence the nursing process [26] [38]. A supportive system facilitates the execution of the nursing process by limiting the volume of activities and ensuring that materials for the task are available. A supportive hospital also ensures that the nursing process is less complex and time-consuming [10] [39]. Since DPI takes the nursing process, staff best comply with it in settings where the hospital systems and procedures guiding the routine activities are supportive [22]. A staff

designated for discharge working with a pharmacist also improves discharge compliance [40].

4.3.2. Health System Factors

This study identified several health system factors contributing to non-compliance with discharge planning implementation (DPI). Staff cited the absence of a system-wide discharge policy as the most significant barrier, followed by the lack of clear responsibility designation and the complexity of discharge planning activities.

These findings align with another study that similarly found that the absence of a standardized, system-wide approach hindered effective discharge practices [41]. This can be explained by the fundamental role of the health system in shaping service delivery. The system determines which services must be provided to patients, establishes the criteria for staff performance evaluation and rewards, and implements mechanisms to ensure that essential activities—such as discharge planning—are consistently carried out [7] [42]. Without a clear, structured policy, staff may lack direction, accountability, and the necessary support to implement DPI effectively.

Although this study found no significant association between the availability of primary caregivers in a patient's community and discharge planning implementation (DPI) compliance, previous research in other settings suggests otherwise [18] [43]. The Ministry of Health (MoH) of Ghana's CHPS implementation policy mandates community health nurses (CHNs) to provide follow-up care for discharged patients [44]. Effective follow-up could serve as a countermeasure to reinforce hospital staff compliance with DPI and ensure continuity of care.

The lack of a significant association in this study may be attributed to the municipality's high CHN-to-population ratio, which likely ensures widespread access to primary healthcare. With CHNs readily available to support discharged patients, the role of primary caregivers in DPI compliance may be less pronounced in this particular setting.

4.3.3. Patient Factors

Findings suggest that a patient's or relative's health literacy significantly influences their understanding of discharge education and instructions, which in turn affects staff compliance with DPI. Additionally, most patients were willing to wait 30 minutes or more for discharge preparation, and those who recognized its importance were more likely to receive DPI than those who did not.

These results are aligned with previous research, which found that negative patient behavior is associated with staff failing to implement discharge planning [7] [23] [24] [28]. Based on these findings, one possible explanation is that staff compliance with DPI may depend, in part, on patients and their families recognizing discharge preparation as essential. When patients or their relatives do not prioritize discharge discussions, they may be less engaged, potentially leading staff to deprioritize DPI as well.

4.4. Limitations of the Study

The study was conducted in only a single hospital and did not explore the possibility of social factors influencing DPI compliance, which limits the generalizability of the findings.

5. Conclusions

The findings from this study suggest that hospital system support influences discharge planning implementation compliance more than any other hospital factor. Among all the identified factors, DPI compliance is most significantly influenced by staff perception and staff-patient communication. These results highlight the importance of providing material resources, streamlining and breaking down discharge planning (DP) activities into more manageable tasks, and assigning these tasks to individual staff members as part of their daily responsibilities. Implementing such a supportive hospital system could increase staff compliance with DPI by more than three and a half times.

Furthermore, the data revealed that the absence of a formal discharge policy and the lack of a designated discharge officer serve as significant barriers to DPI compliance. The study also found that while many patients and their relatives acknowledge the importance of discharge procedures, not all are willing to wait for the necessary preparations on the day of discharge. Therefore, enforcing the early initiation of discharge planning could mitigate the challenges posed by patients and their families, ultimately improving DPI compliance

6. Recommendations

6.1. Ghana Health Service

Based on the study findings, it is recommended that the Ghana Health Service establish a clear discharge policy and guidelines for effective discharge planning implementation. Additionally, a designated officer should be appointed to oversee and coordinate discharge preparation processes.

6.2. Hospital Managers

Hospital management should emphasize the importance of discharge planning by effectively communicating its significance to staff. Furthermore, they should ensure the availability of necessary resources, such as discharge planning sheets in patient folders, and implement systems to assess and reward compliance with discharge planning protocols.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Coleman, E.A. (2003) Falling through the Cracks: Challenges and Opportunities for

Improving Transitional Care for Persons with Continuous Complex Care Needs. *Journal of the American Geriatrics Society*, **51**, 549-555. https://doi.org/10.1046/j.1532-5415.2003.51185.x

[2] Franklin, B.D., Panesar, S.S., Vincent, C. and Donaldson, L.J. (2014) Identifying Systems Failures in the Pathway to a Catastrophic Event: An Analysis of National Incident Report Data Relating to Vinca Alkaloids. *BMJ Quality & Safety*, **23**, 765-772. https://doi.org/10.1136/bmjqs-2013-002572

[3] Lin, C., Cheng, S., Shih, S., Chu, C. and Tjung, J. (2012) Discharge Planning. *International Journal of Gerontology*, **6**, 237-240. https://doi.org/10.1016/j.ijge.2012.05.001

[4] Walraven, C., Mamdani, M., Fang, J. and Austin, P.C. (2004) Continuity of Care and Patient Outcomes after Hospital Discharge. *Journal of General Internal Medicine*, **19**, 624-631. https://doi.org/10.1111/j.1525-1497.2004.30082.x

[5] Kohn, L.T., Corrigan, J.M. and Molla, S. (1999) To Err Is Human. *Medicine*, **126**, 312.

[6] Forster, A.J., Clark, H.D., Menard, A., Dupuis, N., Chernish, R., Chandok, N., Khan, A. and van Walraven, C. (2004) Adverse Events among Medical Patients after Discharge from Hospital. *CMAJ*, **170**, 345-349.

[7] Yam, C.H., Wong, E.L., Cheung, A.W., Chan, F.W., Wong, F.Y. and Yeoh, E. (2012) Framework and Components for Effective Discharge Planning System: A Delphi Methodology. *BMC Health Services Research*, **12**, Article No. 396. https://doi.org/10.1186/1472-6963-12-396

[8] Gonçalves-Bradley, D.C., Lannin, N.A., Clemson, L.M., Cameron, I.D. and Shepperd, S. (2016) Discharge Planning from Hospital. *Cochrane Database of Systematic Reviews*, **2016**, Article No. CD000313. https://doi.org/10.1002/14651858.cd000313.pub5.

[9] Mark, J.L., Williams, V., Greenwald, J. and Budmitz, T. (2014) Comprehensive Program to Improve Discharge Process Reduces Readmissions. Society of Hospital Medicine.

[10] Agency for Healthcare Research and Quality (2013) Care Transitions from Hospital to Home: IDEAL Discharge Planning. Implementation Handbook. http://www.ahrq.gov/professionals/systems/hospital/engagingfamilies/strategy4/index.html

[11] Forster, A.J., Murff, H.J., Peterson, J.F., Gandhi, T.K. and Bates, D.W. (2003) The Incidence and Severity of Adverse Events Affecting Patients after Discharge from the Hospital. *Annals of Internal Medicine*, **138**, 161-167. https://doi.org/10.7326/0003-4819-138-3-200302040-00007

[12] Drodza, J.P. (2013) What Are the Rates of Readmission in the US. *BJM*, **399**, 346.

[13] Jack, B., Greenwald, J., Forsythe, S., O'Donnell, J., Johnson, A., Schipelliti, L., *et al.* (2006) Developing the Tools to Administer a Comprehensive Hospital Discharge Program: The ReEngineered Discharge (RED) Program, Agency for Healthcare Research and Quality (AHRQ).

[14] Snow, V., Beck, D., Budnitz, T., Miller, D.C., Potter, J., Wears, R.L., *et al.* (2009) Transitions of Care Consensus Policy Statement American College of Physicians-Society of General Internal Medicine-Society of Hospital Medicine-American Geriatrics Society-American College of Emergency Physicians-Society of Academic Emergency Medicine. *Journal of General Internal Medicine*, **24**, 971-976. https://doi.org/10.1007/s11606-009-0969-x

[15] Wallace, E., Smith, S.M. and Fahey, T. (2016) Reducing Emergency Admissions through Community Based Interventions. *British Medical Journal*, **352**, h6817. https://doi.org/10.1136/bmj.h6817

[16] Paterson, J.M., Allega, R.L. and Study, S. (1999) Improving Communication between Hospital and Community Physicians Feasibility Study of a Handwritten, Faxed Hospital Discharge Summary. *Canadian Family Physician*, **45**, 2893-2899.

[17] Kansagara, D. (2015) Evidence-Based Synthesis Program Transitions of Care from Hospital to Home: An Overview of Systematic Reviews and Recommendations for Improving Transitional Care in the Veterans Health Administration. U.S. Department of Veterans Affairs.

[18] Bell, S.P., Schnipper, J.L., Goggins, K., Bian, A., Shintani, A., Roumie, C.L., *et al.* (2016) Effect of Pharmacist Counseling Intervention on Health Care Utilization Following Hospital Discharge: A Randomized Control Trial. *Journal of General Internal Medicine*, **31**, 470-477. https://doi.org/10.1007/s11606-016-3596-3

[19] Balaban, R.B., Weissman, J.S., Samuel, P.A. and Woolhandler, S. (2008) Redefining and Redesigning Hospital Discharge to Enhance Patient Care: A Randomized Controlled Study. *Journal of General Internal Medicine*, **23**, 1228-1233. https://doi.org/10.1007/s11606-008-0618-9

[20] Nursing and Midwifery Council, Ghana (2015) Component Task.

[21] Nursing and Midwifery Council, Ghana (2010) Standard Procedure Manual.

[22] Mahmoud, M.H. and Bayoumy, H.M. (2014) Barriers and Facilitators for Execution of Nursing Process from Nurses' Perspective. *International Journal of Advanced Research*, **2**, 300-315. http://journalijar.com/uploads/414_IJAR-2663.pdf

[23] Lin, S., Cheng, S., Shih, S., Chang, W., Chu, C. and Tjung, J. (2013) The Past, Present, and Future of Discharge Planning in Taiwan Region. *International Journal of Gerontology*, **7**, 65-69. https://doi.org/10.1016/j.ijge.2013.01.011

[24] Chang, W., Goopy, S., Lin, C., Barnard, A., Liu, H. and Han, C. (2016) Registered Nurses and Discharge Planning in a Taiwan Region's Ed. *Clinical Nursing Research*, **25**, 512-531. https://doi.org/10.1177/1054773815584138

[25] Mark, T.C.K., Berenson, L. and Levine, D.M. (2006) Basic Business Statistics: Concepts and Applications. 9th Edition, Pearson Prentice Hall, 5-8.

[26] Ledesma-Delgado, M.E. and Mendes, M.M.R. (2009) The Nursing Process Presented as Routine Care Actions: Building Its Meaning in Clinical Nurses' Perspective. *Revista Latino-Americana de Enfermagem*, **17**, 328-334. https://doi.org/10.1590/s0104-11692009000300008

[27] White, E. (2016) Clinical Supervision: Invisibility on the Contemporary Nursing and Midwifery Policy Agenda. *Journal of Advanced Nursing*, **73**, 1251-1254. https://doi.org/10.1111/jan.12970

[28] Pompeo, D.A., Pinto, M.H., Cesarino, C.B., Araújo, R.R.D.F.D. and Poletti, N.A.A. (2007) Nurses' Performance on Hospital Discharge: Patients' Point of View. *Acta Paulista de Enfermagem*, **20**, 345-350. https://doi.org/10.1590/s0103-21002007000300017

[29] Olaogun, A., Oginni, M., Oyedeji, T.A., Nnahiwe, B. and Olatubi, I. (2011) Assessing the Use of the Nanda-International Nursing Diagnoses at the Obafemi Awolowo University Teaching Hospitals Complex, Ile Ife, Nigeria. *International Journal of Nursing Terminologies and Classifications*, **22**, 157-161. https://doi.org/10.1111/j.1744-618x.2011.01190.x

[30] Jooste, K., van der Vyfer, M. and van Dyk, A. (2010) Implementing the Nursing Process in Gynaecology Wards in Namibia. *African Journal of Nursing and Midwifery*, **12**, 87-99.

[31] Lima, A.F.C. and Kurcgant, P. (2006) O processo de implementação do diagnóstico de enfermagem no Hospital Universitário da Universidade de São Paulo. *Revista da Escola de Enfermagem da USP*, **40**, 111-116. https://doi.org/10.1590/s0080-62342006000100016

[32] Emanuel, L., Berwick, D., Conway, M., *et al.* (2008) What Exactly Is Patient Safety? http://www.ahrq.gov/downloads/pub/advances2/vol1/advances-emanuel-berwick_110.pdf

[33] Stahel, P.F. (2014) Patient Safety—Perspectives on Evidence, Information, and Knowledge Transfer. *Patient Safety in Surgery*, **8**, Article No. 33. https://doi.org/10.1186/s13037-014-0033-6

[34] Aiken, L.H., Sermeus, W., Van den Heede, K., Sloane, D.M., Busse, R., McKee, M., *et al.* (2012) Patient Safety, Satisfaction, and Quality of Hospital Care: Cross Sectional Surveys of Nurses and Patients in 12 Countries in Europe and the United States. *BMJ*, **344**, e1717. https://doi.org/10.1136/bmj.e1717

[35] Newman, M., Papadopoulos, I. and Sigsworth, J. (1998) Barriers to Evidence-Based Practice. *Intensive and Critical Care Nursing*, **14**, 231-238. https://doi.org/10.1016/s0964-3397(98)80634-4

[36] Makaryus, A.N. and Friedman, E.A. (2005) Patients' Understanding of Their Treatment Plans and Diagnosis at Discharge. *Mayo Clinic Proceedings*, **80**, 991-994. https://doi.org/10.4065/80.8.991

[37] Kripalani, S., Roumie, C.L., Dalal, A.K., Cawthon, C., Businger, A., Eden, S.K., et al. (2012) Effect of a Pharmacist Intervention on Clinically Important Medication Errors after Hospital Discharge. *Annals of Internal Medicine*, **157**, 1-10. https://doi.org/10.7326/0003-4819-157-1-201207030-00003

[38] Nordmark, S., Zingmark, K. and Lindberg, I. (2016) Process Evaluation of Discharge Planning Implementation in Healthcare Using Normalization Process Theory. *BMC Medical Informatics and Decision Making*, **16**, Article No. 48. https://doi.org/10.1186/s12911-016-0285-4

[39] Agency for Healthcare Research and Quality (2016) Hospital Survey on Patient Safety culture: 2016 User Comparative Database Report. http://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/hospital/2016/2016_hospitalsops_report_pt1.pdf

[40] Jack, B.W., Chetty, V.K., Anthony, D., Greenwald, J.L., Sanchez, G.M., Johnson, A.E., *et al.* (2009) A Reengineered Hospital Discharge Program to Decrease Rehospitalization. *Annals of Internal Medicine*, **150**, 178-187. https://doi.org/10.7326/0003-4819-150-3-200902030-00007

[41] Wong, E.L., Yam, C.H., Cheung, A.W., Leung, M.C., Chan, F.W., Wong, F.Y., *et al.* (2011) Barriers to Effective Discharge Planning: A Qualitative Study Investigating the Perspectives of Frontline Healthcare Professionals. *BMC Health Services Research*, **11**, Article No. 242. https://doi.org/10.1186/1472-6963-11-242

[42] Gilson, L. (2012) Health Policy and Systems Research—A Methodology Reader. Alliance for Health Policy and Systems Research, 18-40.

[43] Waring, J., Marshall, F., Bishop, S., Sahota, O., Walker, M., Currie, G., *et al.* (2014) An Ethnographic Study of Knowledge Sharing across the Boundaries between Care Processes, Services and Organisations: The Contributions to 'Safe' Hospital Dis-

charge. *Health Services and Delivery Research*, **2**, 1-160. https://doi.org/10.3310/hsdr02290

[44] (2014) National Community Health Planning and Services (CHPS) Policy. https://www.moh.gov.gh/wp-content/uploads/2016/02/CHPS-policy-final-working-draft-for-validation.pdf