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# The Practice of Person-Based Discharge Communication Practices in General Surgery Wards at The Kenyatta National Hospital

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**ABSTRACT**

**Purpose:** The current study sought to investigate the practice of person-based discharge communication practices in general surgery wards at the Kenyatta National Hospital.

**Methodology:** The study used the descriptive research design approach. A stratified sampling technique was used to recruit 180 patients who had been discharged in the last one month prior to the study from surgical wards namely the General surgery ward, Urology ward and Neurology ward. A semi-structured questionnaire was used to collect both qualitative and quantitative data. A statistical Package for Social Sciences (SPSS version 25) was used in the data analysis.

**Results:** The findings show that 77 of the respondents in the Neurology unit (mean = 2.97), 51 of them in the general surgical unit (mean = 1.80) and 52 of them in the urology unit (mean = 2.11) agreed that person-based discharge communication practices affect patient health outcomes. There was also a significant difference between the mean responses of the patients in the Neurology ward and Urology ward (-.267*, P=0.026). Likewise, there was a significant difference between the mean responses of the patients in the Urology ward and General surgery ward (-0.313*, P=0.017). Furthermore, the findings indicated that there is a statistically significant relationship between person-based discharge communication practices at KNH given the Neurology ward, Urology ward and General surgery ward departments {(F (2, 177) =3.517, p=0.032< 0.05}. This was supported by the regression findings that indicated that person-based discharge communication practices have a positive and significant effect on patient health outcomes at KNH (β= 0.305, p=0.000). This implies that improvement in one unit of person-based discharge communication practices leads to an improvement in patient health outcomes at KNH by 0.305 units (vice versa is also true).

**Unique contributions to theory, policy and practice:** Based on the study findings, the current study, therefore, recommends the health care practitioners to continuously appreciate the importance placed on constant and regular use of this discharge communication for better patient health outcomes and staff satisfaction, as well as contribute to cost savings to the organization.

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## 1.0 INTRODUCTION

### 1.1 Background of the Study

Discharge communication practices are the processes and techniques used in conveying and delivering the intended discharge communication to the respective patient on a timely and regular basis (Newnham et al., 2017). Patients, however, already suffer significant suffering and frequently fail to get their voices heard, systems are not as effective as they should be and prices continue to increase at unprecedented rates, although quality problems persist. The reduced period of hospital stays, the decline in operating hours of health care providers and the increasing numbers of patient shifts between departments and hospitals demand successful patient transfers, particularly for patients with comorbidities (Halasyamani et al., 2016). Continuity of treatment for patients discharged from the hospital is a vital feature of high-quality patient care (Hesselink et al., 2014). Extremely reliable treatment requires deep coordination between healthcare providers across organizational lines, forming an interdisciplinary network (Cohen SG *et al* 2007).

In the United Kingdom, for example, discharge correspondence is recorded to accompany outpatient or inpatient release and ordinarily appears as a composed release letter or rundown sent by the release nursing staff to the clinician who is to proceed with the treatment of the patient, as a rule, the General Practitioner (GP). This release correspondence will be submitted on the internet or in hard copy as a discharge letter. As a result, it was established that such a mechanism improves the health care experience of the patients (Weetman et al., 2019).

Thus, a poor discharge mechanism in an ED (emergency department) can present weakness for guardians and parental figures and accordingly, consideration should be centred around the licenses' consideration after release. Preferably, the patients/parental figures should be outfitted with the essential information and abilities to successfully oversee themselves/patients while at home. Nonetheless, following the reports on current release measures, numerous guardians and patients can't determine their conclusion, list meds they got, plot post-ED care, or distinguish when to look for additional clinical consideration (Curran et al., 2019; Engel et al., 2009). Specifically, at the KNH, reports have indicated that communication during and after patient discharge is still a major problem in the KNH setup as is portrayed in the patient complaint summaries done quarterly through the patient Affairs unit. Poor communication during discharge results in poor health outcomes that may lead to patient re-admission, increased financial burden and hospital congestion.

Therefore, KNH being the most renowned and the nationally and internationally recognized level 6 hospital in Kenya, the premise offers an ideal study location to investigate the communication strategies applied at the national level to patients after discharge. This helps to offer recommendations to another level 1 to 5 hospitals in Kenya for future policy formulation. In the event the problems are identified, the study, therefore, finds itself maiden research that provides policy, practical and theoretical contributions to the management at the KNH and extrapolates the same to other county hospitals in Kenya.

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### 1.2 Statement of the problem

Good communication at discharge is set to increase the outcomes and safety of the patients, especially after major surgeries. Information transfer among healthcare providers and their patients (Newnham et al., 2017). In essence, the transition from hospital to home while the patient is still recovering is a high-risk period in a patient's illness and in the event of poor communication between healthcare providers at hospital discharge, adverse health outcomes for the patients after discharge usually is the result (Emes et al., 2019; Horstman et al., 2017). However, due to the inaccuracies, omissions, illegibility, logistical failure (for instance information is never delivered), and delays in generation (in essence, dictation or transcription) or transmission, the discharge communication has not been optimized in major public hospitals. In Kenya, the same has been noted in the context of the KNH.

Despite its high status, it often does not meet the desired requirements in everyday clinical practice. The risks create barriers for patients and doctors. Communication during patient discharge is still a major problem in the KNH setup as it is portrayed in the patient complaint summaries done quarterly through the patient Affairs unit (KNH, 2019). Poor communication during discharge results in poor health outcomes that may lead to patient re-admission, increased financial burden and hospital congestion (Shawa et al., 2017; Kaguongo, 2018).

With the prevalence of the given problem, there are still scanty empirical findings shedding light to alleviate the problem. relating to discharge communication thus need to do research. For instance, Lembeck et al. (2019) investigated the effect of a single follow-up home visit on readmission in a group of frail elderly patients in a Danish randomized clinical trial. The study was only focused on readmission rate as the healthcare outcome leaving out the other measures. The study was conducted on a sample of 65 samples in a Danish hospital, Denmark while the current study seeks to generalize the findings at KNH on 90 samples. The study by Kaguongo (2018) was based on mothers and late pre-term infants while the current study tries to extrapolate the findings to all patients in the Surgical department. Okerosi (2016) only provides evidence and recommendations for medication discrepancies on the admission of elderly diabetics at Kenyatta National Hospital while neglecting the aspect of hospital discharge. Gai and Pachamanova (2019) concentrated on discharges from community hospitals in 27 states from 2010 to 2014 while the current study seeks to update the findings as of 2020. These among other studies provide the basis of the current study to investigate the current problem in the Kenyan Context, specifically at the Level 5 hospital - KNH.

### 1.3 Research Objective

To determine the practice of person-based discharge communication practices in general surgery wards at the Kenyatta National Hospital.

### 1.4 Research Questions

What is the practice of person-based discharge communication practices in general surgery wards at the Kenyatta National Hospital?

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## 2.0 LITERATURE REVIEW

### 2.1 Theoretical Review

#### 2.1.1 Peplau's interpersonal relations theory

This nursing theory was developed and coined by Peplau in 1952 (Peplau, 1997; Forchuk, 1993). In 1968, the theory is further improved and acknowledged by authors like Henry Stack Sullivan (Sullivan, 1940), Abraham Maslow (Maslow, 1958), and Neal Elger Miller (Cohen, 1977). This principle is the basis of the art of nursing. The core of Peplau's philosophy is the development of mutual knowledge between the doctor and the patient, as compared to the passive care of the patient (Callaway, 2002). Healthcare workers need to make this simpler through evaluation, definition, formulation, explanation, confirmation and engagement. For instance, when the nurse listens to the patient, he/she gets a general view of the condition of the patient. The physician then confirms their inferences by testing for consistency with the patient. The effect will be experiential learning, better coping skills and professional development for both parties (D'Antonio, Beeber, Sills & Naegle, 2014).

The theory emphasizes the four components/phases of effective nursing communication: the orientation phase, identification phase, exploitation phase, and resolution phase (Peplau, 1952, 1991). Later, these four stages were condensed into three stages: the orientation phase, working phase, and termination phase (Peplau, 1988, 1997). This, therefore, is a process where the nurse-patient relationship is expected to be long-term even after the patient has been discharged from the healthcare facility (D'Antonio, 2004). Evidence has long recognized the need for interpersonal relations and relationships in nursing (Duffy & Hoskins, 2003). In so doing, the build-up of trust and communication between the two helps to give the patient enough and satisfactory assurance that his/her recovery is of value to the caregivers.

Peplau emphasizes the importance of patients' experiences of nursing care through interpersonal relations. Therefore, the focus needs to be on the patients, their needs, and their perceptions about the care they received from nurses. The care likewise has to be effective right from the time the patient check-in the hospital to the time he/she leaves and even during the recovery period after discharge (Gastmans, 1998).

This theory is, therefore, relevant and instrumental to the current study since it introduces the aspect of interpersonal relations between the patients, caregivers, nurses and family members. Given the importance placed on communication as a human resource factor in every organizational setting and an integral part of interpersonal relations, the current study finds the theory in a better position to explain the discharge communication practices (from the orientation, identification, exploitation and through to the resolution phase) that influence the patient health outcomes of in surgical wards at the Kenyatta National Hospital.

### 2.2 Relationship between person-based discharge communication practices and patient health outcomes

Kwame and Petrucka (2020) took a desk approach to assess the interaction of nurse-patient relationships in healthcare environments in sub-Saharan Africa. The study analyzed the keywords related to nurse-patient, provider-patient, nursing staff, nurse-health user, and contact) from thirty-

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two secondary reports, and the study analysis found that communication in nurse-patient encounters was weak, with physicians dominating the process. Most nurses ignore and humiliate patient wishes and complaints as well as violence, particularly in maternal/antenatal and basic healthcare facilities in public health facilities. Occupational stress, lack of sufficient nursing resources, inadequate leadership abilities and lack of participation of nursing supervisors in the treatment process adversely affect the capacity of physicians to communicate efficiently with their patients.

Cené et al. (2016) sought to empirically contribute to the theoretical importance of patient and family engagement (PFE) in ensuring that policy recommendations occur at all levels across the health care system for quality improvement. The study showed little evidence that an effective relationship between the Patient and family members, contributed to poor health outcomes. The study revealed, nevertheless, that while PFE relates to physicians, communities, and practitioners, research is required to evaluate findings beyond satisfaction, overcome adoption hurdles, and promote participation in redesigning practice and improving quality. Collaborating with patients and caregivers has a strong opportunity to promote high-quality treatment and improve outcomes.

Jazieh Volker and Taher (2018) sought to investigate the impact involving the family in patient care has on culturally tailored communication toward improving the healthcare outcomes of the patients from the Intensive Care Unit (ICU), medical and surgical specialities, social services, religious affairs, patient services, and patient's relation. The study revealed that to improve the relationship, clear communication was necessary, however, involving the family through identification was considered a plus in the process.

Newnham et al. (2017) analyzed hospital discharge communication patterns to define the favourite patterns of patients and health care providers, increased patient and provider satisfaction, and enhanced patient comprehension of their medical situation. By evaluating 3489 online databases and 30 which met the inclusion criterion, the study emphasized that the use of technology to offer discharge information was desired by health care professionals and patients, and increased patient awareness of their medical status and guidance for discharge. Therefore, a well-designed IT solution may improve communication, coordination and retention of information, and lead to improved outcomes for patients, their families, caregivers and primary healthcare providers as well as expediting the task for hospital staff.

In the context of the West Midlands of England, the UK, Weetman et al. (2019) sought to enrol at least thirty GPs (General Practitioners), thirty patients and thirty healthcare providers to catch 90 encounters of release correspondence. The examination explicitly tried to research and locate release correspondence encounters of patients, GPs, and emergency clinic experts, close by a relating release letter test. The examination found that Patient and specialist association in correspondence and plan choices improves the correspondence after release. Hence, improving release letters and the cycle of patients accepting letters was recognized as a method of educating guides on release information.

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## 3.0 RESEARCH METHODOLOGY

### 3.1 Research design

The current study took a descriptive cross-sectional research design approach. The design is concerned with experiments that yield facts that are of special interest to society and the state of most objects. This means that consistency and standing facts are given significance in a descriptive survey as described by (Baker, 2017).

### 3.2 Variables

The study dependent variable is the patient health outcomes while the independent variable is person-based discharge communication practices.

### 3.3 Study area

Kenyatta National Hospital (KNH) is the public Referral Hospital of choice in Kenya; a level 6 hospital in Kenya that offers quality specialized health care to patients including open-heart surgery, neurosurgery, orthopaedic surgery, reconstructive surgery, burns management, critical care services, newborn services, ophthalmology (cornea transplant), oncology, palliative care and renal services (including kidney transplantation), among others. KNH was established in 1901 with a capacity of 40 beds. The Hospital operated as a unit of the Ministry of Health until 1987 when its status changed to a State Corporation through Legal Notice No. 109 of 6th April 1987. Over the years KNH has grown to its present capacity of 1,800 beds and attends to an annual average of 700,000 inpatients and 600,000 outpatients (Kenyatta National Hospital, 2018).

### 3.4 Target population

The study targeted discharged surgical patients from the past 30 days after discharge from the Kenyatta National Hospital. The respective target respondents were targeted in the general surgery clinics (from the 3 wards/units namely the General surgery ward, Urology ward and Neurology ward) at the KNH. The study will track the daily discharge for the last 30 days. From the KNH records, 10 patients are discharged every day from each selected ward which is equivalent to 30 patients a day. Therefore, the study targeted 900 discharged patients (30 discharged patients * 30 days) (Kenyatta National Hospital, 2020). The population is as shown below:

**Table 1: Target Population**

| Ward (units) | The population targeted (the past 30 days) |
|---|---|
| General surgery ward | 300 |
| Urology ward | 300 |
| Neurology ward | 300 |
| **Total** | **900** |

*Source: (Kenyatta National Hospital, 2020).*

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### 3.4.1 Inclusive criteria

Inclusion criteria for the study included patients who were admitted to the general surgery unit (the 3 wards namely the General surgery ward, Urology ward and Neurology ward) discharged to their usual place of residence and given clinic appointments.

### 3.4.2 Exclusion criteria

The study excluded the patients with cognitive impairment unable to participate.

### 3.5 Sample and Sampling Techniques

The sample of the current study was selected using a stratified random sampling design. Kothari (2004) and Mugenda (2013) recommend that a sample size of between 10 per cent to 30 per cent is an adequate representation population under study. Therefore, the study chose 20 per cent of 90 discharged patients who are recovering and ready for clinic appointments from their residential places (that is from the past 30 days after discharge). These respondents (discharged patients) were randomly selected from each of the strata (units) by use of a proportionate sampling allocation technique (that is stratified random sampling). The distribution is as shown below:

**Table 2: Sampling Frame**

| Ward (unit) | The population targeted (the past 30days) | Proportionate allocation | Sample size (the past 30days) |
|---|---|---|---|
| General surgery ward | 300 | 0.2*300 | 60 |
| Urology ward | 300 | 0.2*300 | 60 |
| Neurology ward | 300 | 0.2*300 | 60 |
| **Total** | **900** | | **180** |

*Source: (Kenyatta National Hospital, 2020).*

### 3.6 Research Instruments

The information in the present analysis was primary data which was gathered from 180 discharged patients using self-administered semi-structured questionnaires. Semi-structured interviews describe the use of qualitative details over and beyond quantitative knowledge to assist in the collection of personal data. They help the participant to answer individually and to make comprehensive rationales. The use of questionnaires helps to collect unbiased and objective data (Malvey & Neigel, 2017).

### 3.7 Data Collection

After receiving the official consent of the KNH Ethics Committee and the actual researchers, the investigator proceeded to collect primary data collected through self-directed questionnaires. Therefore, the rigid/structured questions were used to collect quantitative data while the open-ended questions were used to collect qualitative data. Secondary data was gathered through the review of past research materials. Study assistants were hired and qualified to help gather results.

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Where appropriate explanations were offered. The research performed direct interviews. Then follow-ups were carried out from time to time to ensure a good response rate of approximately 70 to 100 per cent. Data collection was assisted by 2 research assistants who prior to the collection were rigorously trained and inducted on how to proceed with the collection procedure. This ensured professionalism and reproducibility of the findings.

### 3.8 Data analysis

The study applied both qualitative and quantitative research methods where first the responses were coded in such a manner that the information can be analyzed using SPSS software v25.0 and provided descriptive and inferential output. Findings were presented in form of means, percentages and frequencies where tables, graphs and figures aided in their presentations. Qualitative data was evaluated using thematic analysis and presented in content analysis. The causality analysis was performed by use of R squares, F statistic values and beta parameters all set at 0.05 significance degree. The following model shows the conceptual representation:

$$Y=\beta_0+ \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$$

Where;

Y= Patient health outcomes

$\beta$= Constant (the value of Y when $X_1 = 0$)

$\beta_1$ is the coefficient for X.

$X_1$ = Person-based discharge communication practices

e = error term that is other variables not included in the model that may affect patient health outcomes.

### 3.9 Data Management and Ethical consideration

After receiving the formal consent of the KNH/UON-ERC and the individual participants, the investigator conducted the final analysis. The anonymity and confidentiality of the subjects are both ensured and the right to delete each stage of the analysis is granted to the researchers.

## 4.0 FINDINGS AND PRESENTATIONS

### 4.1 Response Rate

The results below give the level of respondents' cooperation on their views regarding the questions asked, which reflected on different themes.

**Table 3: Response Rate**

| Response | Frequency | Percentage |
|---|---|---|
| Returned | 180 | 100% |
| Unreturned | 0 | 0% |
| **Total** | **180** | 100% |

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The total questionnaires given were 180 of which all of them were properly filled and returned. This return saw a 100% response rate. According to Agustini (2018) and Hardigan et al. (2016), a response rate of above 50% is adequate for a descriptive study.

### 4.2 Patient health outcomes

The findings showed that 3% of the patients were readmitted, the safety of care efficacy was 7%, the level of timeliness in communication was 43% and continuity of care was 49% rating as shown in Figure 1.

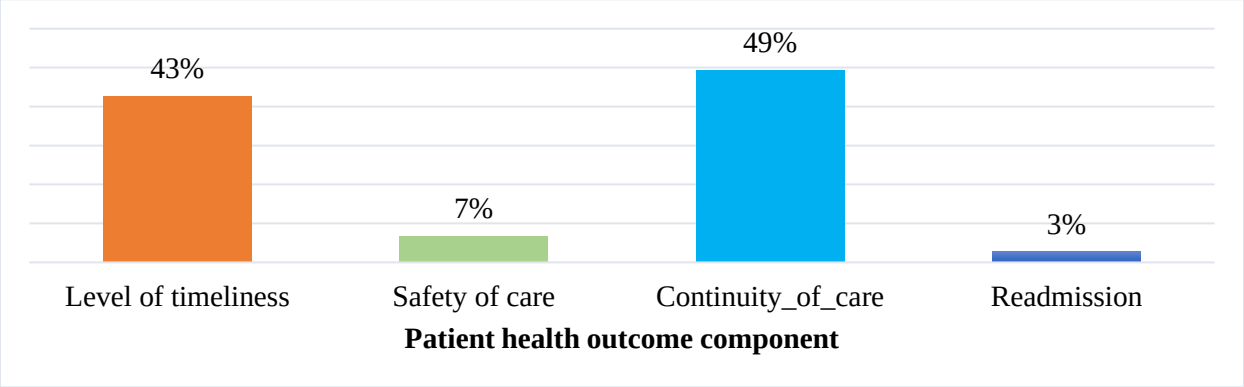


**Figure 1: Patient health outcomes**

The respondents were asked to rate the extent to which they agreed with the statements on patient health outcomes. Their responses were averaged as shown in Table 4:

**Table 4: Descriptive statistics showing the patient health outcomes**

| | More than twice | | 1-2 times | | Never | | Total | |
|---|---|---|---|---|---|---|---|---|
| **Statements** | **%** | **C** | **%** | **C** | **%** | **C** | **M** | **Std Dev** |
| How many times have you been re-admitted | 2.8 | 5 | 13.3 | 24 | 83.9 | 151 | 2.8 | 0.5 |
| | **Yes** | | **Not Sure** | | **No** | | | |
| The visits and/or communication from the healthcare provider is timely/prompt | 46.2 | 85 | 1.6 | 3 | 52.2 | 96 | 2.1 | 1.0 |
| Do you fear for your life after discharge from the hospital? | 16.9 | 31 | 2.2 | 4 | 81.0 | 149 | 2.6 | 0.8 |
| Care coordination programs and interventions are/were effective in improving care transitions from the hospital to your home | 66.3 | 122 | 1.1 | 2 | 32.6 | 60 | 1.7 | 0.9 |
| Your condition has improved greatly since discharge | 85.9 | 158 | 0.5 | 1 | 13.6 | 25 | 1.3 | 0.7 |
| It has taken a shorter time than expected for me to recover from the surgery | 81.5 | 150 | 2.2 | 4 | 16.3 | 30 | 1.4 | 0.8 |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| The pains have significantly reduced after discharge impacting your comfort | 64.1 | 118 | 0.5 | 1 | 35.3 | 65 | 1.7 | 1.0 |
| There are few clerical and discharge mistakes made since my official discharge | 7.6 | 14 | 0.0 | 0 | 92.4 | 170 | 2.9 | 0.5 |
| **Average** | | | | | | | **1.9** | **0.8** |

*Note: C= count, %= Percentage distribution, M= Mean, Std Dev= Standard deviation*

Table 4 revealed that 83.9% (151) indicated that they have never been re-admitted to KNH after their surgery. The results further show that 52.2% (96) of the respondents indicated that the visits and/or communication from the healthcare provider are not timely/prompt. Moreover, 81.0% (149) of the respondents also indicated that they do not fear for their lives after discharge from the hospital. It was noted that 66.3% (122) of the respondents indicated that care coordination programs and interventions are/were effective in improving care transitions from the hospital to their homes. The results likewise showed that 85.9% (158) of the respondents indicated that their condition has improved greatly since discharge. The results further show that 81.5% (150) of the respondents indicated that it has taken a shorter time than expected for me to recover from the surgery. The results further show that 64.1% (118) of the respondents indicated the pain has significantly reduced after discharge impacting their comfort. The results showed that 92.4% (170) of the respondents indicated that there are few clerical and discharge mistakes made since their official discharge.

In summary, the average mean of the responses was 1.90 with a standard deviation of 0.80. On a scale of five points, this means that majority of the respondents agreed with the statements on patient health outcomes. The findings correspond to Hesselink (2014) that continuity of treatment for patients discharged from the hospital is a vital feature of high-quality patient care. Therefore, inaccurate or erroneous data and coordination mistakes between healthcare services and various recipients raise the risk of adverse effects (Simpson et al., 2015). Caregivers need to be concerned about the health state of their patients and their capacity to recuperate while at home, which may influence their longing to rehearse or build up the essential aptitudes. This can be exacerbated if families/guardians feel like their youngster isn't prepared for delivery, or feel unequipped for thinking about the patient at home (Curran et al., 2017).

### 4.3 Re-admissions

**Table 5: Descriptive statistics in percentage showing the responses regarding re-admissions**

| **Re-admissions** | **More than twice** | | **1-2 times** | | **Never** | | **Total** | |
|---|---|---|---|---|---|---|---|---|
| **Statements** | **%** | **C** | **%** | **C** | **%** | **C** | **M** | **Std Dev** |
| How many times have you been re-admitted | 2.8 | 5 | 13.3 | 24 | 83.9 | 151 | 2.8 | 0.5 |

*Note: C= count, %= Percentage distribution, M= Mean, Std Dev= Standard deviation*

In summary, on a scale of 1 to 3 where 1 implies never, 2 implies 1 – 2 times and 3 implies more than twice, the results in Table 5 indicated an average mean of 2.80 with a standard deviation of

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0.50. This implies that the majority of the respondents indicated that they have never been re-admitted after their discharge from KNH.

### 4.4 Timeliness of care

**Table 6: Descriptive statistics in percentage showing the responses regarding the timeliness of care**

| Timeliness of Care | Yes | | Not Sure | | No | | Total | |
|---|---|---|---|---|---|---|---|---|
| Statements | % | C | % | C | % | C | M | Std Dev |
| It has taken a shorter time than expected for me to recover from the surgery | 81.5 | 150 | 2.2 | 4 | 16.3 | 30 | 1.4 | 0.8 |
| The visits and/or communication from the healthcare provider is timely/prompt | 46.2 | 85 | 1.6 | 3 | 52.2 | 96 | 2.1 | 1 |
| **Average** | | | | | | | **1.8** | **0.9** |

*Note: C= count, %= Percentage distribution, M= Mean, Std Dev= Standard deviation*

In summary, on a scale of 1 to 3 where 1 implies yes, 2 implying not sure and 3 implies no, the results in Table 6 indicated an average mean of the responses was 1.80 with a standard deviation of 0.90. This implies that the majority of the respondents indicated that they were not sure about the timeliness of care after their discharge from KNH.

### 4.5 Safety of care

**Table 7: Descriptive statistics in percentage showing the responses regarding the safety of care**

| Safety of Care | Yes | | Not Sure | | No | | Total | |
|---|---|---|---|---|---|---|---|---|
| Statements | % | C | % | C | % | C | M | Std Dev |
| There are few clerical and discharge mistakes made since my official discharge | 7.6 | 14 | 0 | 0 | 92.4 | 170 | 2.9 | 0.5 |
| Do you fear for your life after discharge from the hospital? | 16.9 | 31 | 2.2 | 4 | 81.0 | 149 | 2.6 | 0.8 |
| **Average** | | | | | | | **2.8** | **0.7** |

*Note: C= count, %= Percentage distribution, M= Mean, Std Dev= Standard deviation*

In summary, on a scale of 1 to 3 where 1 implies yes, 2 implying not sure and 3 implies no, the results in Table 7 presented an average mean of the responses was 2.8 with a standard deviation of 0.70. This implies that the majority of the respondents indicated that safety of care has not been continuous after their discharge from KNH.

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### 4.6 Continuity of care

**Table 8: Descriptive statistics in percentage showing the responses regarding continuity of care**

| Continuity of care | Yes | | Not Sure | | No | | Total | |
|---|---|---|---|---|---|---|---|---|
| Statements | % | C | % | C | % | C | M | Std Dev |
| Care coordination programs and interventions are/were effective in improving care transitions from the hospital to your home | 66.3 | 122 | 1.1 | 2 | 32.6 | 60 | 1.7 | 0.9 |
| Your condition has improved greatly since discharge | 85.9 | 158 | 0.5 | 1 | 13.6 | 25 | 1.3 | 0.7 |
| The pains have significantly reduced after discharge impacting your comfort | 64.1 | 118 | 0.5 | 1 | 35.3 | 65 | 1.7 | 1 |
| **Average** | | | | | | | **1.6** | **0.9** |

*Note: C= count, %= Percentage distribution, M= Mean, Std Dev= Standard deviation*

In summary, on a scale of 1 to 3 where 1 implies yes, 2 implying not sure and 3 implies no, the results in Table 8 presented an average mean of the responses was 1.6 with a standard deviation of 0.90. This implies that the majority of the respondents indicated that they were not sure about the continuity of care after their discharge from KNH.

### 4.7 Person-based discharge communication practices

Almost all of the participants, 99% agreed that healthcare providers usually make physical/personalized visits to check up on their progress, and 99% also agreed that there is a clear patient-family council portal that allows patients to access their health information. Further 80% of the participants agreed that they can reach the healthcare providers anytime the need arises as shown in Figure 2.

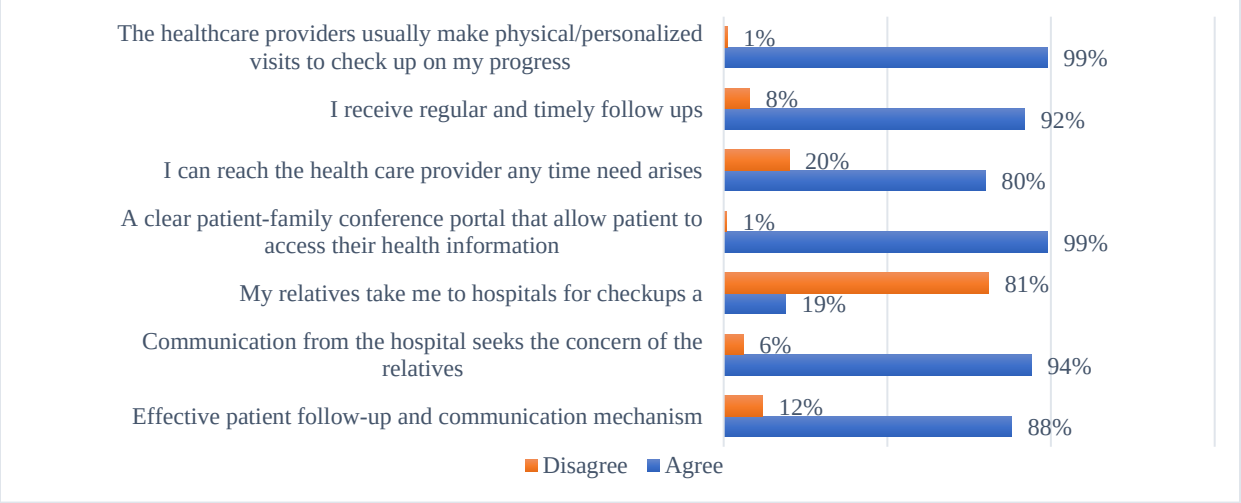

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**Figure 2: Person based discharge communication practices**

The findings agree with Cené et al. (2016) that collaborating with patients and caregivers has a strong opportunity to promote high-quality treatment and improve outcomes. Likewise, Kwame and Petrucka (2020) indicate that occupational stress, lack of sufficient nursing resources, inadequate leadership abilities and lack of participation of nursing supervisors in the treatment process adversely affect the capacity of physicians to communicate efficiently with their patients. Furthermore, the respondents were asked to indicate (in their opinion) what other ways has the person-based discharge communication practices at the KNH influenced their health care outcomes. Table 9 were their responses as shown below:

**Table 9: Content responses regarding person-based discharge communication practices at the KNH**

| Participant responses |
|---|
| 1. It's the last time I'm coming to KNH because of their endless processes and I'm in pain |
| 2. My wound began oozing pus while at home and I didn't have the hospitals contacts so I had to travel the distance to be here |
| 3. I got an emergency while at home and when I called the doctor, he was rude to me I had to seek services from a private hospital |
| 4. I had exams so I delayed my appointment and nobody bothered to find out about my well-being. And hence I've had various infections |
| 5. The hcp promised to follow up after discharge but didn't keep his promise |
| 6. My health has greatly improved |
| 7. I appreciate the doctors because when I call, they receive it and assist |
| 8. I'm not even aware there is something like a follow-up after discharge |
| 9. Having a relative working at the hospital helps |
| 10. I appreciate the frequent follow-ups from the doctor |
| 11. Lack of follow-up has affected my health |
| 12. I live in fear not knowing if I'll make it to the next clinic |
| 13. The doctor gave me a no to be contacted when I have an emergency but the calls are never responded to |
| 14. I was given another patient's card so I missed my clinic by a week |
| 15. I was discharged not being fully recovered the pain was unbearable and I didn't have hospital contacts |
| 16. The discharge process is exhausting by being set from one place to the other |
| 17. Nurses are very rude |

### 4.8 Descriptive Statistics for the responses in Neurology ward, Urology ward and General surgery ward Surgical Units

This section presents a descriptive summary of the mean and standard deviation of the responses of the discharge patients regarding discharge communication practices and patient health outcomes in the Neurology ward, Urology ward and General surgery ward Surgical Departments at KNH. The findings are presented in Table 10.

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**Table 10: Means and standard deviations of discharge communication practices and patient health outcomes in Neurology ward, Urology ward and General surgery ward Surgical Departments at KNH**

| Variables | Surgical Departments | N | Mean | Std. Deviation |
|---|---|---|---|---|
| Person-based discharge communication practices | Neurology ward | 77 | 2.07 | 0.676 |
| | Urology ward | 51 | 1.80 | 0.794 |
| | General surgery ward | 52 | 2.11 | 0.452 |
| | **Total** | **180** | **2.00** | **0.668** |

*Note: Neurology ward -Neurology department, Urology Ward-General department, General surgery ward- Urology department*

Table 10 indicates that 77 of the respondents in the Neurology unit (mean = 2.07), 51 of them in the general unit (mean = 1.80) and 52 of them in the general unit (mean = 2.11) agreed with the statements regarding the person-based discharge communication practices affecting patient health outcomes.

### 4.9 Inferential statistics

Inferential statistics refers to the techniques that allow a study to make inferences about a population based on the collected data from the respective sample. In essence, they allow for the determination of how likely it is to obtain a set of results from a single sample. In the current study, inferential statistics were assessed using correlation and regression analyses.

### 4.9.1 Anova test in person-based discharge communication practices and Patient health outcomes for Neurology ward, Urology ward and General surgery ward departments

Analysis of variance was tested to evaluate the difference in means of the Neurology ward, Urology ward and General surgery ward departments at KNH. That is, whether there are any statistically significant differences between the means of Neurology ward, Urology ward and General surgery ward departments.

**Table 11: ANOVA test for means of Neurology ward, Urology ward and General surgery ward units at KNH.**

| ANOVA | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Person-based discharge communication practices | Between Groups | 3.0500 | 2 | 1.525 | 3.517 | 0.032 |
| | Within Groups | 76.746 | 177 | 0.434 | | |
| | **Total** | **79.796** | **179** | | | |

*df= degree of freedom, F = calculated F statistic, Sig = significance level at 0.05*

Table 11 indicates that there is a significant difference in the means of the Neurology ward, Urology ward and General surgery ward units at KNH person-based discharge communication practices {($F\ (2, 177)$ =3.517, $p=0.032< 0.05$}. These findings agree with Hiponia (2019) that the

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regular use of this discharge communication process has the potential to significantly impact patient and staff satisfaction, as well as contribute to cost savings for the organization.

### 4.9.2 Post Hoc Tests (Multiple Comparisons)

**Table 12: Multiple Comparisons for means of Neurology ward, Urology ward and General surgery ward departments at KNH**

| Dependent Variable | (I) Ward Name | (J) Ward Name | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Person-based discharge communication practices | Neurology ward | Urology ward | .267* | 0.119 | 0.026 | 0.030 | 0.500 |
| | | General surgery ward | -0.047 | 0.118 | 0.693 | -0.280 | 0.190 |
| | Urology ward | Neurology ward | -.267* | 0.119 | 0.026 | -0.500 | -0.03 |
| | | General surgery ward | -.313* | 0.130 | 0.017 | -0.570 | -0.06 |
| | General surgery ward | Neurology ward | 0.047 | 0.118 | 0.693 | -0.190 | 0.280 |
| | | Urology ward | .313* | 0.130 | 0.017 | 0.060 | 0.570 |

With regard to person-based discharge communication practices, Table 4.15 revealed that there was a significant difference between the mean responses of the patients in the Neurology ward and Urology ward (-.267*, P=0.026). Likewise, there was a significant difference between the mean responses of the patients in the Urology ward and General surgery ward (-.313*, P=0.017). The findings are consistent with Salim Al-Damluji et al. (2015) that efficient discharge preparation and recorded summaries are especially important resources that have been shown to mitigate a range of post-discharge problems and unplanned readmission. Cené et al. (2016) also found that patient and family engagement (PFE) relate positively to physicians, communities, and practitioners.

### 4.9.3 Correlation between discharge communication practices on patient health outcomes

The Pearson correlation coefficient was used to determine the association between the variables which is denoted by **r**. When r is above 1, the value of the other variable in linear comparison increases with a positive value, when r is below 1, this shows that there is a negative association and the linear relation decreases on the same line and r = 1, we assert that there is no correlation (Gogtay & Thatte, 2017).

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**Table 13: Correlation analysis between discharge communication practices and patient health outcomes in surgical wards at the Kenyatta National Hospital.**

| Correlations | | Patient health outcomes | Person-based discharge communication practices |
|---|---|---|---|
| Patient health outcomes | Pearson Correlation | 1 | |
| | Sig. (2-tailed) | | |
| | N | 180 | |
| Person-based discharge communication practices | Pearson Correlation | .529** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 180 | 180 |

** Correlation is significant at the 0.01 level (2-tailed).

The results in table 13 above show that there is a positive and significant association between IT-based discharge communication practices and patient health outcomes at KNH (r=0.529**, p=0.000). The strong R-value of 0.529 indicates a value of greater than 0 which implies that IT-based discharge communication practices as a linear variable have a positive association with patient health outcomes at KNH. These findings agree with Newnham et al. (2017) who found that a well-designed IT solution may improve communication, coordination and retention of information, and lead to improved outcomes for patients, their families, caregivers and primary healthcare providers as well as expediting the task for hospital staff.

### 4.9.4 Regression of coefficients for discharge communication practices

**Table 14: Regression of coefficients for discharge communication practices**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| **Variables** | **β** | **Std. Error** | **Beta** | **t** | **Sig.** |
| (Constant) | 0.300 | 0.116 | | 2.574 | 0.011 |
| Person-based discharge communication practices | 0.196 | 0.057 | 0.201 | 3.419 | 0.001 |

a Dependent Variable: Patient health outcomes

Table 14 revealed that IT-based discharge communication practices have a positive and significant effect on patient health outcomes at KNH (**β** = 0.196, p=0.001). This implies that improvement in 1 unit of IT-based discharge communication practices leads to an improvement in patient health outcomes at KNH by 0.196 units (vice versa is also true). These findings agree with Graumlich et al. (2007) and Curran et al. (2017) that video monitoring of discharge contact can offer an ability to collect essential data such as temporality, duration and non-verbal actions that can affect the post-discharge information exchange. Likewise, Haire (2017) underscores that clinicians agree that Teach-Back education is very instrumental, timely and effective in communication.

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The following model shows the actual representation:

$$Y=0.300 + 0.196X_1 + e$$

Where;

Y= Patient health outcomes

$X_1$ = Person-based discharge communication practices

e = error term that is other variables not included in the model that may affect patient health outcomes.

## 5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

### 5.1 Summary of the findings

The findings show that 77 of the respondents in the Neurology unit (mean = 2.97), 51 of them in the general surgical unit (mean = 1.80) and 52 of them in the urology unit (mean = 2.11) agreed that person-based discharge communication practices affect patient health outcomes. There was also a significant difference between the mean responses of the patients in the Neurology ward and Urology ward (-.267*, P=0.026). Likewise, there was a significant difference between the mean responses of the patients in the Urology ward and General surgery ward (-0.313*, P=0.017). Furthermore, the findings indicated that there is a statistically significant relationship between person-based discharge communication practices at KNH given the Neurology ward, Urology ward and General surgery ward departments {($F\ (2, 177)$ =3.517, $p=0.032< 0.05$}. The correlation findings indicated that there is a significant effect on person-based discharge communication practices and patient health outcomes at KNH (r=0.533**, p=0.000). This was supported by the regression findings that indicated that person-based discharge communication practices have a positive and significant effect on patient health outcomes at KNH (β= 0.305, p=0.000). This implies that improvement in one unit of person-based discharge communication practices leads to an improvement in patient health outcomes at KNH by 0.305 units (vice versa is also true).

The findings are consistent with Jazieh Volker and Taher (2018) who indicated that to improve the relationship, clear communication was necessary, however, involving the family through identifying was considered a plus in the process. Weetman, Dale, Scott and Schnurr (2019) along the same vein note that patient and specialist association in correspondence and plan choices improves the correspondence after release. Hence, improving release letters and the cycle of patients accepting letters was recognized as a method of educating guides on release information.

### 5.2 Conclusion

The study, therefore, confirms that by applying the best discharge communication practice, the patient health outcomes will improve since the aspects of timely responses, coordination of activities and undistorted information are ensured for quality service delivery. This was confirmed by the study that care coordination programs and interventions become effective in improving care transitions from the hospital to the patients' homes. The study thus, confirms that effective patient follow-up and communication mechanism plays a significant role in ensuring positive patient health outcomes. Clear patient-family conference mechanism also goes a long way in allowing the

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patient to follow their health information. Besides, regular physical and personal visits by the healthcare providers help to speed up the patient recovery process by ensuring they are on course with the recovery plan.

### 5.3 Recommendations

Based on the study findings, the current study, therefore, recommends the health care practitioners to continuously appreciate the importance placed on constant and regular use of this discharge communication for better patient health outcomes and staff satisfaction, as well as contribute to cost savings to the organization.

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