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Impact of Timely Documentation on Healthcare Delivery System in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi

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ABSTRACT

Inadequacy or lack of timely updating and recording of health-related information in medical records do occur in various healthcare settings, which can lead to several issues, which can compromise the quality and continuity of care. Timely documentation among clinical staff, which facilitates diagnosis and treatment, communicates pertinent information to the other caregivers to ensure patient safety, reduce medical error and serves as an important medico-legal function in risk management. The study aimed to investigate the impact of timely documentation on healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi. Methods used are structured questionnaire of health professionals in ATBUTH with questions targeted in accordance with the specific objective of this study, the sampling technique employed was a random sampling which is a sub-group of people chosen by chance in a way that everyone has the chance of being selected. Two hundred questionnaires were distributed and one hundred and seventy-one retrieved personally. Results of the finding are: majority of respondents are male (57.9 %), the highest profession that responded is health information officer/technician (34.5%) and lowest is physiotherapist (2.9%), highest respondent years of experience is 1-10 years (59.1%). The highest respondents affirm that accuracy of documentation, easy accessibility of documentation, completeness of documentation, consistency of information in documentation, and timeliness of documentation have an impact on health care delivery in ATBUTH. From the study it was found that timeliness of documentation has an impact on healthcare delivery system in ATBUTH. At the end of the study it was concluded that timeliness of documentation is effective in healthcare delivery system. It is recommended that medical and clinical personnel should maintain the timeliness, accuracy, integrity, availability, and consistency of all clinical documentation.

Keywords: timeliness, documentation, healthcare, ATBUTH

INTRODUCTION

The World Health Organization (2017) has defined a health system as all organizations, people and actions whose primary intent is to promote, restore or maintain health. The framework presented here is meant to be broadly descriptive. This includes efforts that influence health determinants and health-improving activities (Taiye, 2015). A health system encompasses publicly owned facilities which deliver personal health services, health insurance organizations, a mother's care for a sick child at home; vector-control campaigns, efforts of private health care providers; behaviour change programmes, occupational health and safety legislation (Lau et al., 2000). It also takes into consideration inter-sectoral action by health staff, such as enhancing the ministry of education to promote female education which facilitates the growth of good health (Kumar, Putul, & Rituraj, 2014). The health care delivery system is the process of meeting the health care needs of people, institutions, and resources and other

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target populations (Jasemi et al., 2013). There are numerous health care delivery systems globally. However, nations design and develop the health delivery system which is following their needs and resources. A health care delivery system is the organization of people, institutions, and resources to deliver health care services to meet the health needs of a target population, whether a single-provider practice or a large health care system (Karp et al., 2015). The essential health systems consist of primary healthcare which is a whole of society approach to health and wellbeing centered on the needs and preferences of individuals, families and the public health care system which is the effort of governments, trade unions, charities, religious organizations, or other coordinated bodies to deliver planned health care services targeted to the populations they serve. Health care planning and distribution are evolutionary rather than revolutionary (WHO, 2017).

The elements of the healthcare framework were divided into 6 domains and their respective elements (Maroofi, 2016). First Domain is *capacity* which is the physical assets and their ownership, personnel, and organizational characteristics of a delivery system that determine the number of individuals and breadth of conditions for which the system can provide care. Elements include size, capital assets, and comprehensiveness of services (Daller, 2022). Second Domain is *organizational structure which is* the components of an organization, both formal and informal, that describe functional operations in terms of hierarchy of authority and the flow of information, patients, and resources. Elements include organizational configuration; leadership, structure, and governance; research and innovation; and professional education (Bozeman et al., 2017). Third Domain is *finances* which are the mechanisms by which a health care delivery system is paid for its services and the financial arrangements and practices of the system and organizations within the system to allocate those funds, as well as the system's financial status. Elements include payment received for services, provider payment systems, ownership, and financial solvency (Nyamtema, 2020). Fourth Domain is *patients* which are the demographic characteristics, as well as wants, needs, and preferences of individuals and families of individuals who receive health care services from a health care delivery system. Elements include patient characteristics and geographic characteristics. Fifth Domain is *care processes and infrastructure* which are the methods by which a health care delivery system provides health care services to its customers and patients as well as the degree of coordination of those methods (Blake-Mowatt, Lindo, & Bennett, 2013). Elements include integration, standardization, performance measurement, public reporting, quality improvement, health information systems, patient care teams, clinical decision support, and care coordination (Haque, Horvat, & Verhelst, 2014). Sixth Domain is *culture* which is the long-standing, largely implicit shared values, beliefs, and assumptions that influence behaviour, attitudes, and meaning in an organization. Elements include patient centeredness, cultural competence, competition–collaboration continuum, community benefit, and innovation diffusion and working climate (Mogli, 2019).

According to Tang, LaRosa, and Gorden (1999), documentation is vital to safe, ethical, and effective clinical practice. Clinical practice requires documentation to ensure continuity of care, planning, and accountability, as well as in the promotion and uptake of evidence-based practice, documentation provides a method of evaluating the quality system performance of the supplier to sense the provider of quality material and product is selected. In acuminate care operation or treatment, it is critical to document each patient condition and history of care, to ensure the patient receives the adequate health care, the information must be passed through all the health professionals of the care giver, adequate documentation is always important in a healthcare setting (Adeleke et al., 2014).

MATERIALS AND METHODS

Research Design

This study employed the use of a survey research design. The choice of this research design was considered appropriate because of its advantages of identifying attributes of a large population from a group of individuals. The design was suitable for the study as the study sought to examine subject matters using Abubakar Tafawa Balewa University Teaching Hospital, Bauchi as a case study.

Population of the Study

The population of this study consisted of selected 400 clinical personnel in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Sample Size and Sampling Techniques

As a result of the inability of the researcher to effectively study the whole staff strength (population) of the organization, a representative number was chosen as the sample size population. Two hundred (200) staff was used as the sample size. The sample size was calculated using the Taro Yemeni scientific formula which is given as:

$$n = \frac{\text{N}}{1 + N(e)^2}$$

n = 226.09, approximately 226

Method of Data Analysis

Tables and the simple percentage was used as a technique of analysing the research questions while chi-square was used to test the research hypotheses. All the tests were conducted at 0.05 level of significance.

Decision Rule

The decision to either reject or accept the null hypothesis (H_o) was reached using the following rules:

If the calculated value (t-cal) is greater than the table value (t-tab), the null hypothesis (H_o) will be rejected in favour of the alternative hypothesis (H_i) and if the table value (t-tab) is greater than the calculated value (t-cal) the alternative hypothesis (H_i) will be rejected in favour of the null hypothesis.

RESULTS

Demographic Characteristics of the Respondents

Table 1. Gender distribution of the respondents

Gender	**Frequency**	**%**
Male	99	57.9
Female	72	42.1
Total	**171**	**100**

Table 1 shows the distribution of respondent's gender, majority of the responded where male (N=99, 57.9%) while female respondents (N=72, 42.1%) complete the respondents.

Table 2. Profession distribution of the respondents

Profession	Frequency	%
Doctor	30	17.5
Nurse	42	24.6
Med Lab Scientist	15	8.8
Pharmacist	12	7.0
Physiotherapist	5	2.9
Health Information Officer/Technician	59	34.5
Dietician	8	4.7
Total	**171**	**100**

Table 2 above shows that health information officers/technicians have the highest respondents 59 (34.5%), followed by nurses with 42 (24.6%) then doctors with 30 (17.5%) respondents, while medical laboratory scientist with 15 (8.8%), pharmacists with 12 (7.0%), dieticians 8 (4.7%) and physiotherapist with 5 (2.9%) respondent.

Table 3. Years of experience distribution of the respondents

Years of Experience	Frequency	%
1-10	101	59.1
11-20	30	17.5
21-30	20	11.7
31 Above	20	11.7
Total	**171**	**100.0**

Table 3 above shows the distribution of years of experience of the respondents. 21-30 and ≥ 31 have the lowest representation with N = 20 (11.7%), followed by 11-20 N = 30 (17.5%) respondents, while 1-10 recorded the highest respondents with N = 101 (59.1%).

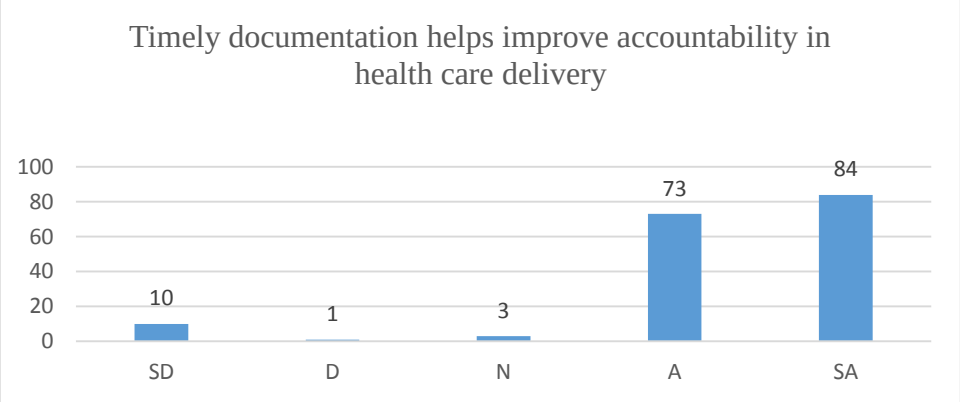

Figure 1. Bar chart of timely documentation helps improve accountability in health care delivery

Figure 1 shows how most of the respondents 157 (91.8%) agree and strongly agree that timely documentation helps improve accountability in health care delivery with 10 (5.8%) strongly disagreeing that it does not while 3 (1.8%) are neutral.

Figure 2 shows that majority of the respondents agree that timely documentation promotes better communication and dissemination of information among members of the multi-professional health team.

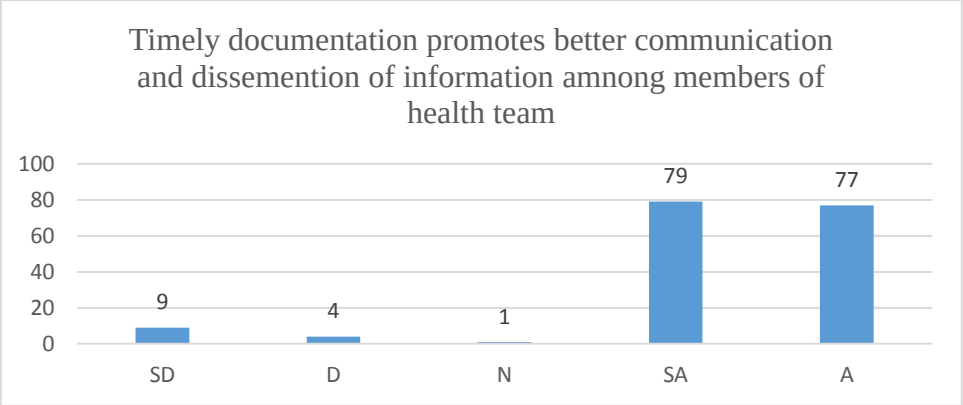

Figure 2. Bar chart of timely documentation promotes better communication and dissemination of information among members of the multi-professional health team

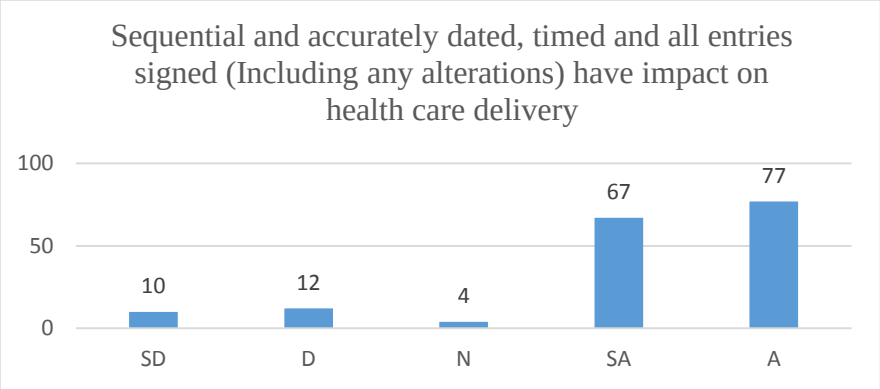

Figure 3. Bar chart of sequential and accurately dated, timed and all entries signed (Including any alterations) have impact on health care delivery

Figure 3 above clearly shows how majority of the respondents 67 (39.2%) strongly agree and 77 (45.0%) agree that sequential and accurately dated, timed and all entries signed (Including any alterations) have impact on health care delivery. While 10 (5.8%) strongly disagree and 12 (7.0%) disagree that sequential and accurately dated, timed and all entries signed (Including any alterations) does not have impact on health care delivery.

Table 4. Timely documentation supports effective clinical judgment

Response	**Frequency**	**%**
SD	8	4.7
D	15	8.8
N	16	9.4
SA	52	30.4
A	79	46.2
Total	**170**	**99.4**

Table 4 shows that 79 (46.2) of the respondents agree that timely documentation supports effective clinical judgment, while 52 (30.4%) also strongly agree. 15 (8.8%) disagree that timely documentation does not support effective clinical judgment with 8 (4.7%) strongly disagreeing also. 16 (9.4%) are neutral on whether timely documentation does or does not supports effective clinical judgment.

Table 5. Timely healthcare documentation should be stored appropriately and should be available at all times to those giving input to the patient care and should only be destroyed following your local hospital policy

Responses	Frequency	%
SD	15	8.8
D	9	5.3
N	2	1.2
SA	56	32.7
A	88	51.5
Total	**170**	**99.4**

The above table shows distribution of respondents on whether timely healthcare documentation should be stored appropriately and should be available at all times to those giving input to the patient care and should only be destroyed following your local hospital policy, 88 (51.5%) agree, 56 (32.7%) strongly agree. 9 (5.3%) disagree and 15 (8.8%) strongly disagree that timely healthcare documentation should not be stored appropriately and should not be available at all times to those giving input to the patient care and should be destroyed without even following local hospital policy.

Table 6. Timely documentation ease access to healthcare documentation and continuity

Responses	Frequency	%
SD	12	7.0
D	11	6.4
N	2	1.2
SA	61	35.7
A	84	49.1
Total	**170**	**99.4**

The above table shows distribution of respondents on whether timely documentation ease access to healthcare documentation and continuity, 145 (84.8%) belief that timely documentation easy access to healthcare documentation and continuity, while 23 (13.4%) disagree that timely documentation ease access to healthcare documentation and continuity.

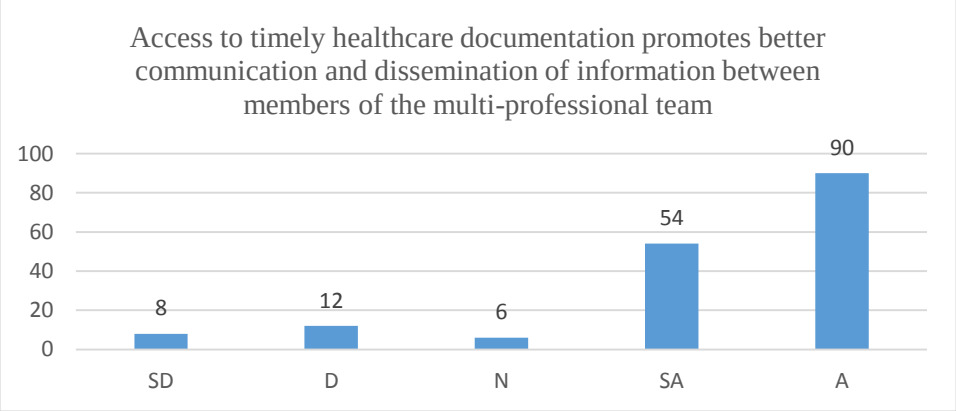

Figure 4. Bar chart of access to timely healthcare documentation promotes better communication and dissemination of information between members of the multi-professional team

Figure 4 above shows that majority of the respondents 90 (52.6%) and 54 (31.6%) strongly agree and agree that access to timely healthcare documentation promotes better communication and dissemination of information between members of the multi-professional team. While, 12 (7.0%) and 8 (4.7%) disagree and strongly disagree that access to timely healthcare documentation does not promotes better communication and dissemination of information between members of the multi-professional team in any way.

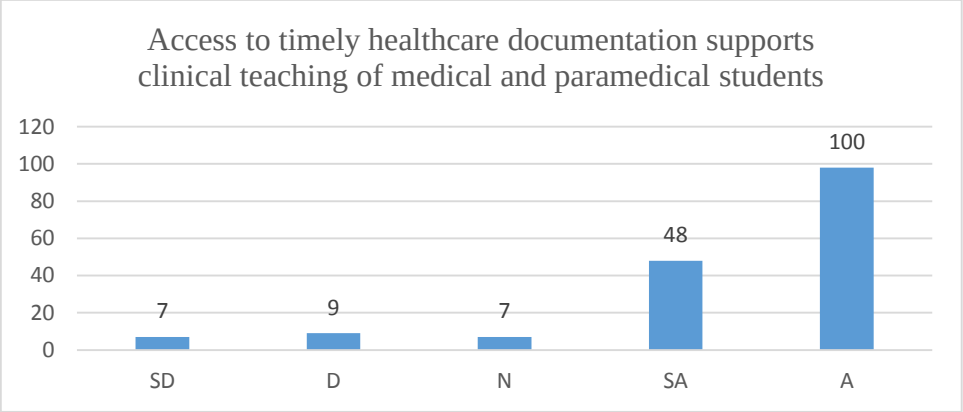

Figure 5. Bar chart of access to timely healthcare documentation supports clinical teaching of medical and paramedical students

Figure 5 above shows that most of the respondents 100 (58.5%) agree that access to timely healthcare documentation supports clinical teaching of medical and paramedical students, 48 (28.1%) strongly agreeing. 9 (5.3%) disagree, 7 (4.1%) strongly disagreeing that access to timely healthcare documentation supports clinical teaching of medical and paramedical students.

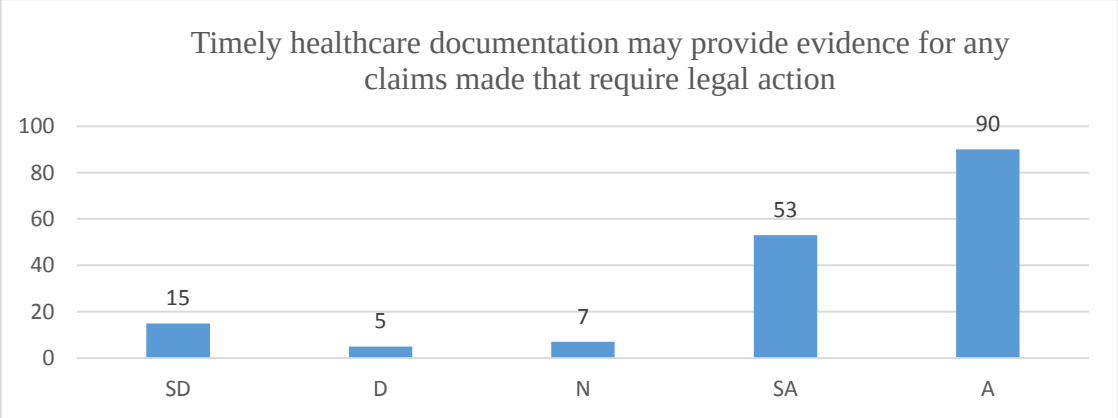

Figure 6. Bar chart of timely healthcare documentation may provide evidence for any claims made that require legal action

Figure 6 shows how almost all the respondents 90 (52.6%) agrees, 53 (31.0%) strongly agrees that timely healthcare documentation may provide evidence for any claims made that require legal action. Some few of the respondents 5 (2.9%) disagree, 15 (8.8%) strongly disagree that timely healthcare documentation may provide evidence for any claims made that require legal action.

Table 7. All healthcare documentation should be dated and timed within 24-hour clock

Response	Frequency	%
SD	11	6.4
D	7	4.1
N	6	3.5
SA	56	32.7
A	90	52.6
Total	**170**	**99.4**

Table 7 above shows distribution of respondents on whether all healthcare documentation should be dated and timed within 24-hour clock. 90 (52.6%) agree and 56 (32.7%) strongly agree that all healthcare documentation should be dated and timed within 24-hour clock. 7 (4.1%) disagree and 11 (6.4%) strongly disagree that all healthcare documentation should be dated and timed within 24-hour clock.

Table 8. Timely healthcare documentation supports effective clinical judgment

Response	Frequency	%
SD	14	8.2
D	14	8.2
N	11	6.4
SA	38	22.2
A	94	55.0
Total	**171**	**100.0**

Table 8 shows the distribution of respondents on whether timely healthcare documentation supports effective clinical judgment. 94 (55%) agree and 38 (22.2%) strongly agree that timely healthcare documentation supports effective clinical judgment. While, 14 (8.2%) disagree and strongly disagree. Furthermore, 11 (6.4%) are neutral on the issue.

Table 9. Healthcare documentation should be updated as soon as possible after any recordable event

Response	Frequency	%
SD	12	7.0
D	5	2.9
N	6	3.5
SA	44	25.7
A	104	60.8
Total	**171**	**100.0**

Table 9 shows distribution of respondents on whether healthcare documentation should be updated as soon as possible after any recordable event. 104 (60.8%) respondents agree that healthcare documentation should be updated as soon as possible after any recordable event, 44 (25.7%) respondents also strongly agree. While, 12 (7%) strongly disagree, 5 (2.9%) disagree.

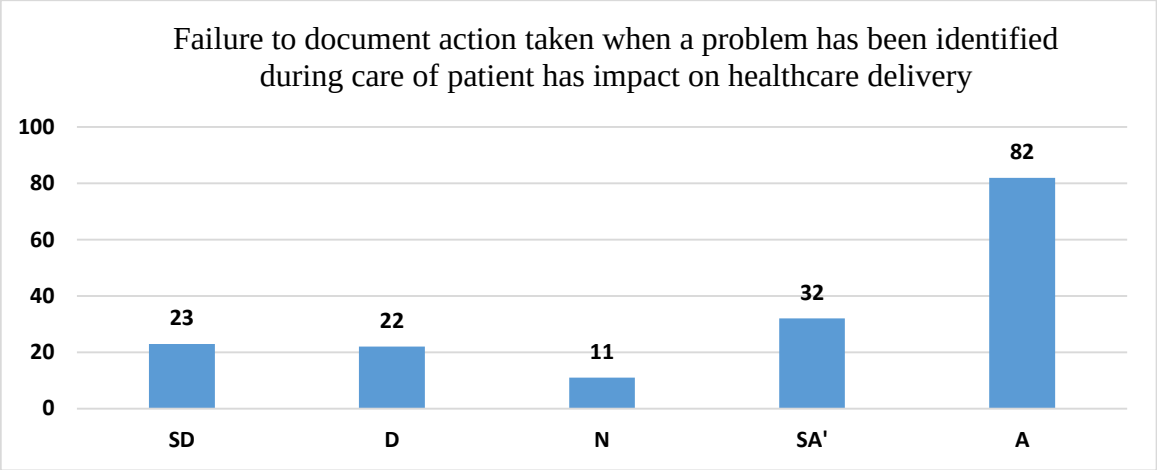

Figure 7. Bar chart of failure to document action taken when a problem has been identified during care of patient has impact on healthcare delivery

Figure 7 shows clearly how most of the respondents 82 (48.0%) agree that failure to document action taken when a problem has been identified during care of patient has no impact on healthcare delivery, with 23(13.5%) respondent strongly disagreeing.

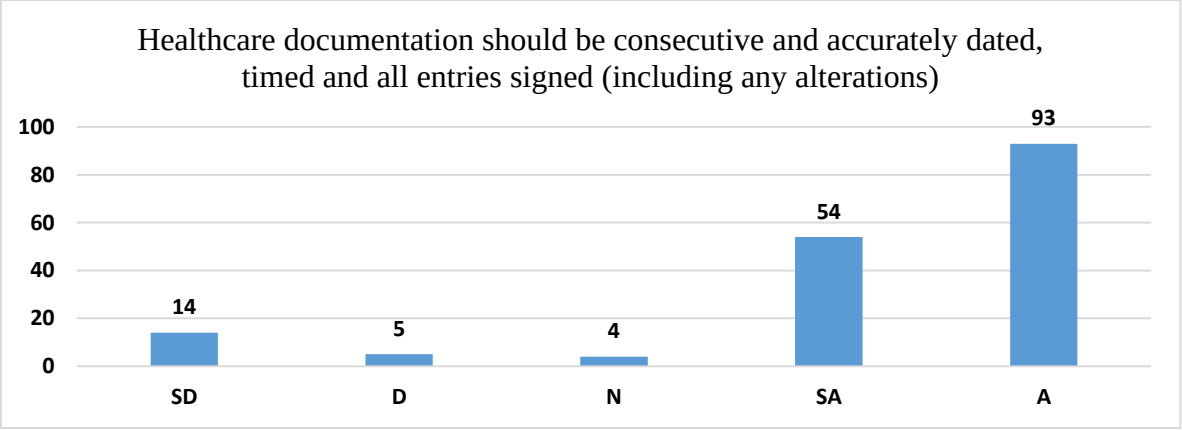

Figure 8. Bar chart of healthcare documentation should be consecutive and accurately dated, timed and all entries signed (including any alterations)

Figure 8 above shows clearly how 93 (54.5%) respondents agree that healthcare documentation should be consecutive and accurately dated, timed and all entries signed (including any alterations**)**, with few respondents 14 (8.2%) strongly disagreeing.

Hypothesis Testing

Table 10. Hypothesis I

Hypothesis I	
	Timely documentation helps improve accountability in health care delivery
Chi-Square	194.351[a]
df	4
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 34.2.	

Conclusion: since p – value 194.351 is greater than significance level (α = 0.05), we accept our null hypothesis and conclude that there is impact of timely documentation on healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Table 11. Hypothesis II

Hypothesis II	
	Timely access to healthcare documentation supports clinical audit, research, allocation of resources and performance planning
Chi-Square	157.118[a]
df	4
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 34.0.	

Conclusion: since p – value 157.118 is greater than significance level (α = 0.05), we accept our null hypothesis and conclude that there is impact of timely accessibility of documentation on healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Table 12. Hypothesis III

Hypothesis III	
	Timely healthcare documentation supports effective clinical judgment
Chi-Square	131.647[a]
df	4
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 34.0.	

Conclusion: since p – value 131.647 is greater than significance level (α = 0.05), we accept our null hypothesis and conclude that there is impact of timely documentation on healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Table 13. Hypotheses IV

Hypothesis IV	
	Timely healthcare documentation supports effective clinical judgment
Chi-Square	195.294[a]
df	5
Asymp. Sig.	.000
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 28.3.	

Conclusion: since p – value 195.254 is greater than significance level (α = 0.05), we accept our null hypothesis and conclude that there is impact of consistency in timeliness of documentation on effective healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

DISCUSSION

This study focused on the impact of timely documentation on the health delivery system case study of Abubakar Tafawa Balewa University Teaching Hospital, Bauchi.

Access to timely healthcare documentation promotes better communication and dissemination of information between members of the multi-professional team, access to timely healthcare documentation supports clinical teaching of medical and paramedical students. Timely documentation helps improve accountability in health care delivery, timely documentation promotes better communication and dissemination of information among members of the multi-professional health team and timely documentation supports effective clinical judgment.

Timely healthcare documentation provides evidence for any claims made that require legal action.

Complete healthcare documentation shows how decisions were made relating to the patient's care, timely documentation ease access to healthcare documentation makes the continuity of care and timely documentation easy access to healthcare documentation supports clinical audit, research, allocation of resources and performance planning.

Failure to document action taken when a problem has been identified during care of patient has impact on healthcare delivery. Timely healthcare documentation supports effective clinical judgments.

CONCLUSION

The main purpose of this study is to evaluate the impact of timely documentation on healthcare delivery system in Abubakar Tafawa Balewa University Teaching Hospital, Bauchi. In this study, a survey research design was adopted, the population of this study consisted of medical and clinical personnel, Abubakar Tafawa Balewa University Teaching Hospital {ATBUTH}, a simple random sampling technique was used to select 200 respondents for the study and a questionnaire was the instrument for data collection. Relevant literatures were reviewed which guided the objectives and methodology of this study. As result of the field study and analysis of results, the following findings were made:

Timeliness of documentation is effective on healthcare delivery system, timely accessibility of documentation is effective on health healthcare delivery system, timely documentation is effective on healthcare delivery system, and impact of timeliness on documentation is effective on healthcare delivery system

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

All healthcare documentation should be dated and timed within 24-hour clock.

Medical and clinical personnel should maintain the confidentiality, integrity, availability, and security of all clinical documentation. Complete healthcare documentation should be concluded with the signature, printed name and designation of the person making entry, as well as a contact phone number. Healthcare documentation entry should be structured and legible, also Healthcare documentation pages must show the patient's name, date, time and a hospital number. Admissions and consultations should be filled chronologically in the healthcare documentation.

Healthcare documentation should be sequential and accurately dated, timed and all entries signed (including any alterations), also healthcare documentation should be stored appropriately and should be available at all times to those giving input to the patient care and should only be destroyed following the local hospital policy. Healthcare documentation should be updated as soon as possible after any recordable event failure to document action taken when a problem has been identified during care of patient has impact on healthcare delivery.

Healthcare documentation should be void of meaningless phrases, speculation and offensive subjective statements/insulting or derogatory language, also it should provide current information on the care and condition of the patient. There should be continued enlightenment programme in form of public seminars, awareness to clinical professionals about the importance of documenting patient's care, and government should provide adequate documenting facilities and also employ more nurses in the hospital.

Electronic health records management practice is needed and the need to move away from the usual manual record management practice to ensure easy and fast access to storage, retrieval and security of patients' records.

With documentation of health records, particular emphasis must be placed on the five factors that improve the quality and usefulness of charted information. – Accuracy – Relevance – Completeness – Timeliness – Confidentiality.

The ministry of health {federal and state} and hospital management should create policy to follow during documentation by all clinical and medical personnel contributing to patient care. There should be an entrenchment of the culture of proper documentations.

IMPLICATIONS OF THE STUDY

The findings of the study had implications on timeliness of documentation in health care delivery. Timely documentation plays a crucial role in any treatment setting. Documentation helps assure continuity of care. There are many important moments in treatment. Proper documentation can help the practitioner to recall those moments. If a practitioner isn't utilizing the tool of documentation it would prove to be very difficult to make continual progress on any one area, let alone multiple areas.

Thorough documentation helps to assist the client's subsequent care. It's important for practitioners, who may serve the client down the line, have proper information. Without meaningful documentation, it would prove difficult for any future practitioner to continue timely progress. As I mentioned earlier, it is important to identify patterns and track the clients progress; if the new practitioner isn't aware of the knowledge, insight, and progress you have made, it would be a hindrance to any further progress until the practitioner is able to discover and the learn the insight on their own. This is not only a determent to the subsequent practitioners but to your client as well.

In every field, it's important to minimize as much risk as possible. Documentation is a great tool in protecting against lawsuits and complaints. Documentation help ensure consent and expectations. It helps to tell the narrative for decisions made, and how yourself or the client responded to different situations. In this same manor, it is important to record information that can help support the proper treatment plan and the reasoning for such services. There are many legal and regulatory requirements in this field, and proper documentation helps to maintain compliance. If documentation isn't up to par it could affect licenses and or accreditation. It would be difficult to defend or explain one's actions to a licensing board without the supporting documentation.

Any professional is always looking for ways to improve, or a better approach, a more successful course of treatment, or fresh ideas to tackle ongoing problems. Documentation is crucial in achieving these measures. When something is successful it's important to document the approach and results so it can be replicated. Documentation will help determine if these were isolated results or a possible approach to treatment that could continually produce successful outcomes.

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