ASSESSMENT OF PATIENT SATISFACTION REGARDING THE TIME REQUIRED TO INITIATE THE TREATMENT AND TIME TAKEN FOR DOCUMENTATION OF MEDICOLEGAL CASES AT THE EMERGENCY DEPARTMENT OF A RURAL GOVERNMENT HOSPITAL IN UTTAR PRADESH, INDIA

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Abstract

Background: Patient safety has grown into a distinct healthcare discipline based on developing scientific knowledge. Patient satisfaction is a systematic approach to ensuring that health services use their resources to improve the population's health most efficiently. It addresses the patient's specific needs.

Aim: To assess patient satisfaction with treatment initiation time and documentation time of medico-legal cases in the emergency department of a rural government hospital by conducting a patient satisfaction survey.

Material and method: This prospective, observational survey study was conducted at the emergency and trauma department of UPUMS, Saifai, Etawah, from February 2023 to August 2023 on 800 medicolegal patients requiring emergency care. This quantitative study included a questionnaire and a quality Likert scale response. A pilot study on 50 patients was conducted to determine the reliability of responses and validity of the questionnaires. After receiving approval from the scientific and ethical committee, a mixed-mode survey was carried out, including a written and an in-person face-to-face interview. Data collected was analysed on an ordinal measurement scale using nonparametric statistical methods.

Results: Patients were dissatisfied with treatment initiation time and the time taken for the medicolegal documentation process. For the time it took to start the treatment, more than half of the patients (62%) were dissatisfied, and only 31% were satisfied. The younger age group (18 to 41 years) opted very poor, 8% more than the older age group (42 to 65 years). Patients in the older age group were 11% more satisfied than patients in the younger age group. Perceptions of the quality of treatment initiation were almost the same in male and female patient groups (p = 0.440) but differed significantly in the age group (p <0.001). When asked about the time taken for medico-legal documentation, 39% of the patients did not comment. Of these, 53% were females. 42% of the 800 patients were dissatisfied, and only 19% were satisfied. There was a significant difference in perception (p=.011) between the gender groups but no significant difference (p=0.263) between the age groups. There is a significant correlation with Spearman's rho coefficient of 0.939 between the time to start treatment and the documentation of Medco legal patients.

Conclusion: Delays in initiating treatment and documenting medico-legal cases are common in rural hospital emergency departments. Factors such as prehospital delay, triage process, human resources, transportation equipment, bed availability, and overcrowding contribute to this issue.

10222

Research is needed to identify effective solutions. Awareness, large-scale studies, and feedback mechanisms can improve patient safety culture.

Keywords: patient safety, satisfaction, medico-legal, documentation, emergency, nonparametric, ordinal

Introduction

Access to health care varies across countries, groups, and individuals, primarily influenced by background, individual characteristics, behaviours, lifestyle, social and economic conditions, and the health policies in place. Countries and their jurisdictions have different policies concerning their personal and population-based healthcare goals within their societies.[1] Despite the work environment regulations, many exposures and risk situations cannot be avoided. Therefore, hospitals must have a health safety policy.

In recent years, there has been growing recognition that patient safety and quality of care are critical dimensions of universal health coverage (UHC). Establishing cultures, processes, procedures, practices, technologies, and environments in healthcare that consistently and significantly decrease risk, minimise the likelihood of preventable harm, make error less likely, and reduce its impact when it does occur is referred to as patient safety.[2] In addition to accessibility, acceptability, efficiency, and people-centeredness, patient safety serves as a quality-of-care attribute.

Patient satisfaction is an essential indicator of the healthcare delivery standard and a crucial benchmark for assessing and improving healthcare services.[3] There is an increasing impetus for shared decision-making and patient-centred care.[4] Healthcare is shifting to become more patient-centric by empowering and involving patients in many aspects of their treatment journey.[5] The evaluation of institutional accountability is based on assessing patient satisfaction, which is now an essential indicator in any calculation of quality or significance.[6] Patient satisfaction measurement is a cost-effective, non-invasive indicator of healthcare quality. The Joint Commission on Accreditation of Healthcare Organizations (JACHO 1994)[7] has embraced patient satisfaction as a valid indicator and mandatory in its 1994 standard for accreditation that "the organisation gathers, assesses and takes appropriate action on the information that relates to patient satisfaction with service provider".

Emergency care is the provision of time-sensitive interventions that must be given to prevent death and disability, and delays of even a few hours could jeopardise prognosis or make care less effective.[8] Supreme Court of India; (Parmanand Katara versus Union of India AIR1989SC2039).[10] mandated the delivery of care by any and everyone regardless of the patient paying and medico-legal status in times of emergency.[11] Patients "Right to Life", guaranteed under Article 21 of the constitution of India, states that no medical individual or hospital shall deny timely medical treatment to a person in need of such treatment. A delay in the treatment exists when a patient doesn't receive treatment within the reasonable time limit that it should have been provided, whether prehospital treatment, medication, physical therapy, laboratory investigations, or any other form of treatment.[13] If any conduct contributes to medical malpractice, healthcare

professionals are accountable and subject to legal action for failing to deliver care promptly. Medical malpractice occurs when the negligence of a healthcare professional causes injury to a patient with whom they have had a professional relationship.[14]

An attending physician who determines after the patient's history and clinical examination that an investigation by law enforcement is necessary to establish responsibility for the case under the country's legal system is called a medicolegal case (MLC). MLC cases are injuries due to accidents and assault, suspected or evident cases of suicide or homicides (even attempted cases), confirmed or suspected cases of poisoning, burns, sexual offences, suspected or evident criminal abortion, child abuse, domestic violence, natural disaster; all patients brought to the hospital in suspicious circumstances / improper history, unconscious patients where the cause of unconscious is not clear, brought in dead, a person under police custody or judicial custody. Precise and comprehensive documentation of these medico-legal cases is essential to minimise legal complexities, incertitude, and disarray that can result in miscommunication and wasted time. Medical records must be accurate, precise, and complete, including personal information about the patient and every noteworthy development during their care.[15] Documentation is essential for process management and quality assurance.

Even if the approaches used to identify risks in healthcare today have advantages and disadvantages, it is unclear whether they have been adopted effectively or exactly how well they have been integrated to give a whole picture of risk inside sophisticated healthcare systems. Gaps in the theoretical and conceptual underpinning of safety climate and the evidence base for its practical application in healthcare remain. According to an evaluation of the research on emergency healthcare systems related to low- and middle-income countries, there are several knowledge gaps.[16] There is a need to understand better the epidemiology of conditions that may be addressed by emergency systems in these countries and to understand which interventions may address them adequately. Unfortunately, while several studies have been carried out which have explored the parameters of patient satisfaction in tertiary care centres and large hospitals in India, very little attention has been paid to studies of patient satisfaction at rural health institutions.

Materials and Methods

This research was conducted in the Department of Emergency and Trauma of a rural government hospital in Uttar Pradesh, UPUMS, Saifai, Etawah, UP, India, from February 2023 to August 2023. The population of interest were the patients admitted to the hospital's emergency department during the research time frame. Inclusion criteria were the Medico legal patients between 18 and 65, with Glasgow Coma Scale (GCS) =15, admitted and stayed in the emergency department for more than 6 hours. Red-triaged patients, patients with psychiatric illness, GCS <15, and the age of less than 18 years or more than 65 years were excluded from the study. Independent variables were the time taken to initiate the treatment and the time taken for medicolegal documentation, and the dependent variable was the patients' quality perception score.

Considering the purpose and the parameters, my best approach was to use a quantitative research method, descriptive and comparative. Survey research is one of the best ways to gather

large-scale data within a specified time. I used cross-sectional, mixed-mode survey techniques involving a written questionnaire and face-to-face patient interview. The sample size, calculated by Slovin's formula for 3000 patients with a 5% margin of error and 95% confidence interval, was 341. Survey instruments were close-ended, structured, and validated questionnaires, and the response was evaluated by quality Likert scale score. Likert scale items were no comment, very poor, poor, good, and excellent.

The idea behind adding 'no comment' to the Likert scale items is to allow respondents to indicate that either they do not have an opinion on a particular issue or do not have any knowledge about the subject mentioned in the questionnaire. The No comment option also gives a sense of neutrality to the Likert scale survey. (Fowler1995)[17]

Although each option was labelled using numbers, the numerals only indicated orders/rank/score. This does not necessarily imply that the distance between two adjacent options was equal. The distance between the categories is uneven or unknown. So, the scale I used followed measurements of an ordinal categorical scale. Only monotonic or positive linear transformations, not one-to-one substitution, are permitted for data on ordinal Likert scales.[18] With the ordinal measurement, category levels were assigned to observations to rank / score scale and order them with respect to one another.

The pilot study of 50 patients tested the questionnaire for reliability of responses by test-retest and ordinal Omega (0.992) and validity by coefficient correlation Pearson (0.92). The expert institutional committee validated the feasibility of the research. After approval from the scientific and ethical committee, a survey was conducted, and the responses were collected from 800 sample patients selected by simple random probability sampling.

The data collected was entered into an Excel spreadsheet. Data entry was done in a manner that one person was asked to read the values while, at the same time, another person entered the data. One person reading and entering data simultaneously is highly prone to error. Data was then transferred to the data analytics software tool 'IBM SPSS version 29' for further data cleansing, coding of the various variables, and statistical analysis.

Analyses of the sample data were done with the help of frequency tables, percentage pie charts, and comparison bar graphs. Considering the ordinal scale of responses, Median and Mode were taken to measure central tendency and Skewness for the deviation from the normal distribution. The normality of distribution was also checked with the Kolmogorov-Smirnov test (K-S test) and Shapiro-Wilk test (S-W test). In both tests, the p-value was <0.001. So, the distribution was not normal. To make inferences about the population, I used nonparametric statistical tests. Parametric tests only work with normally distributed data. In contrast, non-parametric tests do not make this type of assumption about the shape of the population from which the study data has been drawn. Nonparametric tests are less powerful than parametric tests and usually require a large sample size to have the same power as the parametric test to find the difference between groups when the difference actually exists. One potential problem with using parametric methods for ordinal Likert data is the normality assumption. If a parametric test is used on nonparametric data, then this could trick the test into seeing a significant effect when there isn't

one. This is very dangerous; 'the type 1 error' or 'false positive'. A nonparametric test for parametric data could reduce the chance of seeing a significant effect when there is one. This is not ideal: a 'type 2 error' or a missed opportunity. I felt the type 2 error is statistically the least dangerous of these two errors.

The nonparametric tests used were a one-sample Wilcoxon signed rank test to make inferences about the central tendency of the population and the Mann- Whitney U test to compare different demographic variables like age and gender in the population. In the Mann-Whitney U test, if the variance was homogeneous, i.e., the shape of the distribution in both the categories is the same. We can take the median as the measure of the central tendency, and if the variance is heterogeneous, i.e., the shape of the distribution in both categories is not the same. We can take mean ranks for the measure of central tendency.

I used the Spearman rank correlation test to see whether there is any correlation between the time taken to start treatment and the time taken for medicolegal documentation.

Results

1. Patients' quality perception of time taken for starting of treatment of MLC

Quality Perception	Score	No. of Respondents		GENDER				AGE			
		n	%	Male		Female		18-41 years		42-65 years	
				n	%	n	%	n	%	n	%
No Comment	1	56	7	24	5	35	11	34	10	24	5
Very Poor	2	232	29	143	30	81	25	89	27	89	19
Poor	3	256	32	153	32	113	35	99	30	150	32
Good	4	152	19	96	20	55	17	69	21	127	27
Excellent	5	104	13	62	13	39	12	39	12	80	17
TOTAL		800		478		322		330		470	

Table 1: Frequency distribution table for time taken in starting of treatment for medico-legal cases

Figure 1 shows that more than half of the patients, i.e., 62% of the 800 patients, were unsatisfied with the time to start their treatment. 18% considered good, and 13% considered excellent. 7% did not comment when asked about the time taken to start treatment.
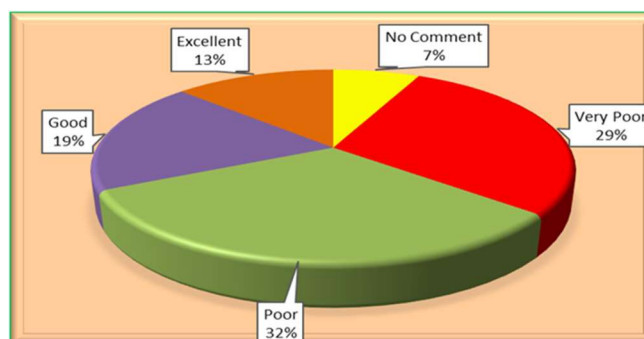

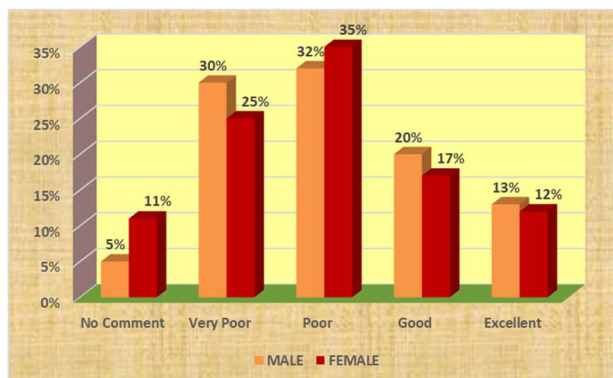Figure 1: Pie chart showing percentage distribution

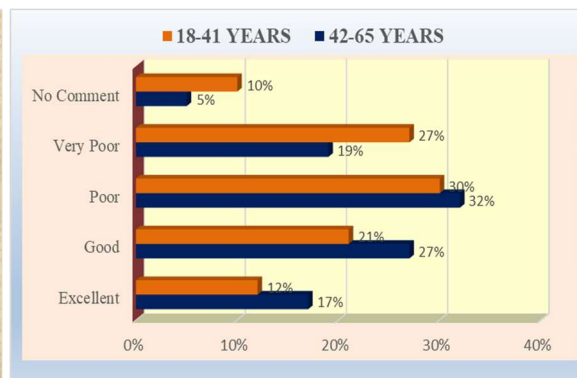Figure 2: Bar graph showing comparison of gender responses

Figure 3: Bar graph showing comparison of age groups

In the bar graph for gender (figure 2), there is no such difference between the groups. The Bar graph for age (figure 3) shows a slight difference, with the number of younger patients opting for very poor, 8% more than the older age group. The percentage of patients considered good (6% more) and excellent (5% more) for their response in the older age group compared to the younger age group.

Median = 2.92 (Middle of the cumulative frequency), and Mode is 3 (Poor response)
Skewness = 0.215 positive skewness, with right-tailed distribution, more values are on the left side of the distribution. The p-value in the K-S and S-W tests is <0.05 (table 4), so the distribution deviates significantly from the normal distribution.

One-Sample Wilcoxon Signed Rank Test: p-value <0.001 (table 7), which is less than the significant level of 0.05. We reject the null hypothesis. This means the central tendency of the population for the responses towards the time taken for starting treatment in an emergency is different from what we assumed to be a Good response. The test is two-sided and statistically significant, so the responses can be both-sided.

Comparison of responses for different gender and age groups

- Median for both male and female groups, the younger age group (18-41 years), and the older age group (42-65 years) is 3, i.e., Poor response.
- In gender and age groups, the p-value <0.001 is for both the K-S and S-W tests (table 4). The p-value in both the tests is <0.05, so the distribution deviates significantly from the normal distribution.
- There is slight positive skewness in the distribution of responses (0.270 for males and 0.158 for females). Since the skewness is close to 0, we can say that the data is nearly symmetrical.
- The variance for the male group was 1.213, and for the female group, it was 1.338. There is a difference in the variance between the two groups. So, for the assumption of homogeneity of variance, we have to look for the shape of the distribution.
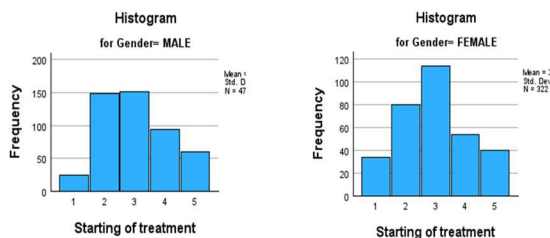
Figure 4: Histograms showing shapes of distribution for gender groups

p-value = 0.757 (table 5), Which is greater than the significant level of 0.05. So, we fail to reject the null hypothesis. There is no difference in the shape of the distribution of responses between the two groups in the population. Variance is heterogeneous. We take the Median to compare the distribution of the responses between the two groups in the population.

- There is slight negative skewness (-0.126) in the distribution of responses in the older age group and slight positive skewness (0.115) in the younger age group.
- The variance for the younger age group is 1.385, and for the older age group, it is 1.227. There is a slight difference in the variance between the two groups. So, for the assumption of homogeneity of variance, we have to look for the shape of the distribution.

p-value= 0.572 (table 6), greater than the significant level of 0.05. Fail to reject the null hypothesis. There is a similarity in the shapes of the distribution of responses between the two age groups in the population. Variance is homogeneous. We take the Median to compare the distribution of the responses between the two age groups in the population.
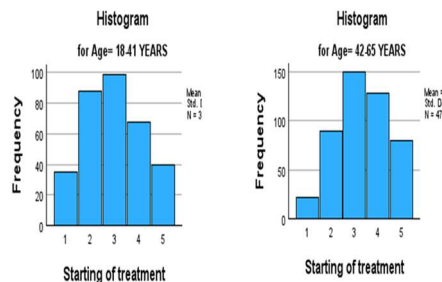

Figure 5: : Histograms showing shapes of distribution for age groups

Independent-Samples Mann-Whitney U Test

For the gender comparison, the p-value = 0.440 (table 7), greater than the significant level of 0.05. We fail to reject the null hypothesis. The distribution of the median of the responses for the time taken to start the treatment is the same across the male and female categories in the population.

For the age group comparison, the p-value <.001(table 7) is less than the significant level of 0.05. We reject the null hypothesis. The distribution of the median of the responses to the start of treatment differs across the population's younger and older age groups.

We can say that the perception of the quality of the time taken for initiating the treatment in the emergency department is more or less equal in the male and female patients' population but different in the younger and older patients admitted to the emergency department.

2. **Patients' quality perception for the time taken for medicolegal documentation of MLC**

Quality Perception	Score	No. of Respondents		GENDER				AGE			
		n	%	Male		Female		18-41 years		42-65 years	
				n	%	n	%	n	%	n	%
No Comment	1	312	39	143	30	167	52	125	38	188	40
Very Poor	2	176	22	148	31	35	11	73	22	108	23
Poor	3	160	20	119	25	39	12	46	14	85	18
Good	4	96	12	53	11	42	13	59	18	56	12
Excellent	5	56	7	14	3	39	12	27	8	33	7
Total		800		478		322		330		470	

Table 2: Frequency distribution table for time taken in medico-legal documentation
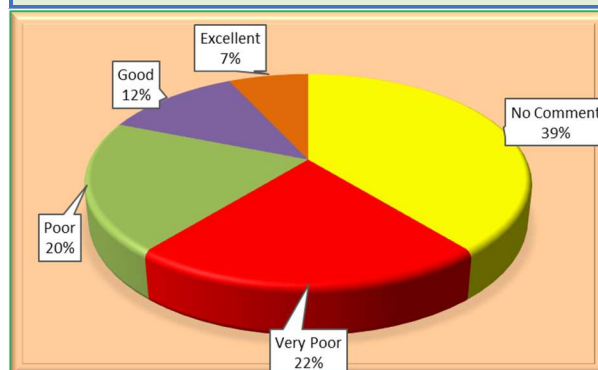

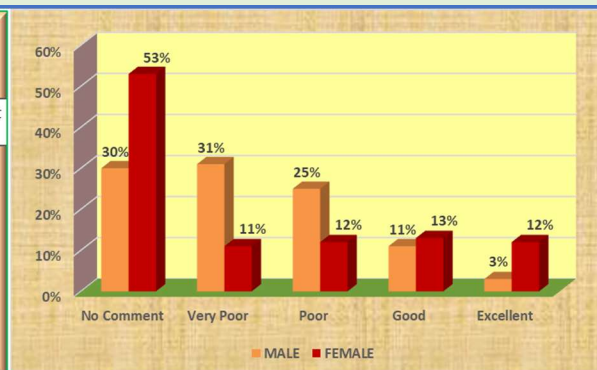Figure 6: Pie chart showing percentage distribution comparison

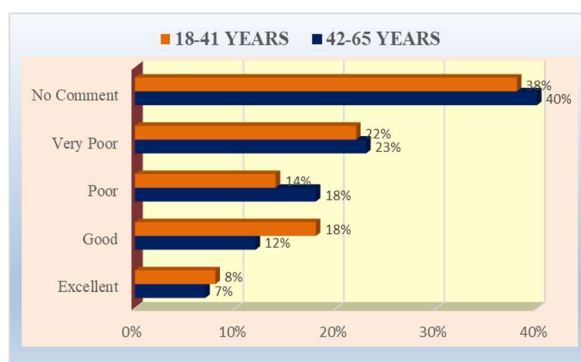Figure 7: Bar graph showing gender comparison

Figure 8: Bar graph showing age comparison

From the study of Table 2 and graphs, it is observed that most of the patients, 39% (figure 6), did not comment. Of these patients, 53% of the females (figure 7) opted for no comment. 42% of the total 800 patients were unsatisfied, whereas 19% of the total gave a good and excellent response when asked about the time taken for the documentation process. Other than the no comment, responses for quality of documentation processes in the gender categories were equally distributed. From the figure, the opinion of younger and older age groups is almost similar in responses, with only a 6% difference in Good response, more for the older age group.

- Median is 2, i.e., Very Poor (for cumulative data), and Mode is 1. (No Comment).

- Slightly positive Skegness 0.666. Right-tailed distribution with more values on the left side of the distribution.
- K-S Test and S-W Test p-value <.001. So, the Distribution deviates significantly from the normal distribution.

One-Sample Wilcoxon Signed Rank Test: Since p-value < 0.001(table 7) is less than the significant level of 0.05. We reject the null hypothesis. The central tendency of the population for responses towards the time taken for medicolegal documentation in the emergency department is different from what we thought to be a GOOD response.

Comparison of responses for differences in gender and age categories

- The median for the male patient group is 2 (Very poor), and for the female patient group, it is 1 (No Comment). The median in the younger age group (18-41 years) and for the older age group (42-65 years) is 2, i.e., Very Poor.
- In both gender and age groups, the p-value <0.001 for both the tests. The p-value in both the tests is <0.05, so the distribution deviates significantly from the normal distribution.
- There is positive skewness in the distribution of responses in both gender groups (0.528 for males and 0.760 for females). We can say that the data is right-tailed with more values towards the left side of the curve.
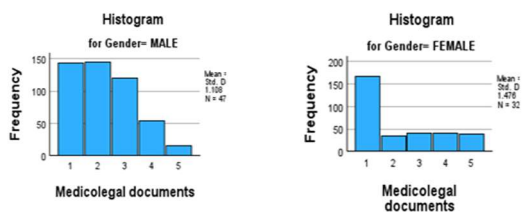- The variance of the male group is 1.28, and that of the female group is 2.180.

Figure 9: Histograms showing shapes of distribution for gender groups

Looking at the two histograms (figure 9), we see that the shape of the distribution is not the same. The homogeneity test of variance is less than 0.001 (table 5). There was a difference in the shape of the distribution, so we took mean ranks to compare the distribution of responses between the two groups in the population.

- There is slight positive skewness in the distribution of responses in both age groups. Since the skewness is close to 0.5, we can say that the data is nearly symmetrical.
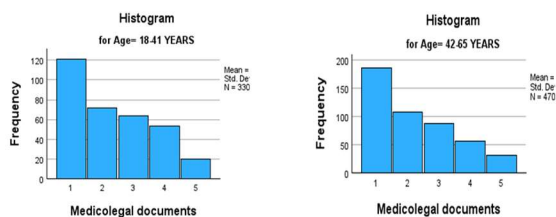

Figure 10: Histograms showing shapes of distribution for age groups

Looking at the two histograms (figure 10) and conducting a homogeneity test (table 6) of variance, which came out to be 0.46, we can say that the distribution shape is the same for both age groups. So, we take the median to compare the distribution of responses between the two age groups in the population.

Mann-Whitney U test

The mean rank of the male patient group (416.79) is greater than the mean rank of the female patient group (376.31).

For the gender comparison, P-value=0.011, which is less than the significant level of 0.05. We reject the null hypothesis. The distribution of mean ranks of responses for the time taken for medico-legal documentation differs across the population's male and female categories.
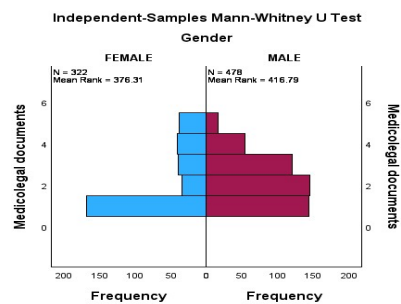

Figure 11: Mean Rank comparison

For the age group comparison, the P value = 0.263, greater than the significant level of 0.05. We fail to reject the null hypothesis. The distribution of the median of responses for the time taken for the medico-legal documentation process is the same across the population's younger and older age groups.

From the above results, the quality perception of the time taken for the medico-legal documentation process in the emergency department is different for the male and female patient populations, but there is no difference in the quality perception for younger and older patient populations.

Correlations

			Medico-legal documents	Starting of treatment
Spearman's rho	Medico-legal documents	Correlation Coefficient	1.000	.939**
		Sig. (2-tailed)	.	<.001
		N	800	800
	Starting of treatment	Correlation Coefficient	.939**	1.000
		Sig. (2-tailed)	<.001	.
		N	800	800

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

Spearman's rank correlation coefficient for the time taken for starting treatment and time taken for medico-legal documentation is 0.939. There is a strong correlation between the two. At the same time, this does not show whether one causes the other.

Table 3: Nonparametric Spearman's correlation test

Summary of results

There is dissatisfaction among patients about the time taken to start treatment and the time taken for medico-legal documentation for the medico-legal cases coming to the emergency department. For the time taken to start treatment, there is no significant difference in quality perception between the male and female patients. However, the younger age group patients are more dissatisfied than the older age group patients. When asked about the time taken for the medico-legal documentation process, male patients were more dissatisfied, and most female patients chose not to comment. There was no significant difference between the age groups in perception of the time taken for medicolegal documentation in the emergency department.

Discussion

Healthcare systems can be divided into four main domains. Healthcare workers, patients receiving health care, health care delivery processes, and feedback and continuous improvement methods.[19] About one-third of India's population lives in urban areas, with the remainder residing in 597608 villages in rural India (census 2011). In India, there is a shortage of healthcare providers in rural areas. Only 28% of the population is served by the 74% of doctors who live in metropolitan regions.[8] India only has 0.9 beds per 1000 people, only 30% of which are in rural areas, according to the national health profile. This severely hampers access to healthcare in rural areas.[20] Doctors are less likely to live in rural locations due to the lack of suitable housing, healthcare, children's education, drinking water, electricity, roads, and transportation.[21] The imbalance between doctors and patients is among the most critical issues. The government hospitals currently exceed the WHO recommendation of one doctor per 1,000 patients in India, where a doctor cares for around 11,000 patients. The Indian Journal of Public Health estimates India will require 20 lakh doctors by 2030. Additionally, in rural areas, there is often an acute shortage of infrastructure for healthcare.[22] Treatment delays could be related to a lack of human resources and insufficient availability of healthcare facilities.[23]

Affective emergency medical systems provide timely medical care to prevent death or disability. Most emergency departments in universities and government hospitals do not adhere to the emergency department categorisation standards offered by the Society of Academic Emergency Medicine (SAEM).[24] In India, particularly in rural areas, one of the biggest challenges to patient safety is the need for more regulations, standard operating procedures, transparency and accountability, and the absence of a structured monitoring system. Triage, something that is instrumental to good emergency care, is rarely practised. Additionally, even if it is used, implementing triage scales like the SATS in settings with limited resources has been found to maximise the utilisation of time and resources when identifying and categorising patients.[25] The time to finally receive treatment will also depend on patient flow through the emergency department, high patient load, the need for multiple interdepartmental references, and a lack of a dedicated department for emergency and trauma services.[26] Lack of awareness among patients and communities about their rights and responsibilities is another significant factor impacting the patient safety culture in India.

Maintaining accurate data on their patients is crucial for treating physicians and healthcare facilities.[28] Medical insurance companies also require proper record-keeping to prove the patient's

demand for medical expenses; otherwise, it can result in a decline in medical claims.[29] Medico-legal cases, documentation is equally important as the court of law requires the documents, and improper documentation can lead to alleged medical negligence.

Despite knowing the importance of proper documentation, most hospitals in India still follow the traditional manual method of record keeping. There are some limitations to manual documentation procedures, including more time taken for documentation, large storage space required, and difficulties retrieving the records when needed. However, it is legally more acceptable as documentary evidence in a court of law. Nowadays, we have seen the digitalisation of medical records that are neat and can be easily stored and retrieved. The Government of India, while unveiling the National Health portal, has come up with guidelines for electronic health record standards in India. To make medical data portable and easily transferrable, the document suggests a set of criteria that various healthcare service providers should follow in India.[30]

There are few courses and educational materials, especially those that deal with the study of patient safety in emergency care. Emergency medical systems are a neglected subject that is a part of the 10/90 gap in health research, where less than 10% of worldwide research funding is allocated to issues that affect 90% of the world's population.[31] There is an urgent need for well-designed, locally relevant studies demonstrating effectiveness. These gaps reflect the need for a more systematic analysis of the areas towards which research investments should be directed so that systems can be based on credible evidence.

Recommendations

It is also essential to improve patient safety in the emergency department.

1. To develop a robust integrated emergency care service system that comprehensively addresses all medical and surgical emergencies, including trauma-related care.
2. To standardise emergency care practices, protocols, guidelines, and SOPs.
3. To develop systems to ensure free treatment for emergency care services for all needy patients, covering the minimal required period for early stabilisation.
4. To evaluate and assess the effectiveness of solutions in real-life settings in terms of their impact, acceptability, and affordability.
5. To identify the gaps in quality, structure, process, and outcome.
6. To recommend alterations in infrastructural designs and management processes of the facilities to meet the requirements.
7. To take on large-scale research on recommendations and measures to fill the gaps.

Suggestions to improve MLC-related services:

1. Ensure equitable distribution of MLC-related services among the government and private sectors.
2. Dedicated EMO (Emergency Medical Officer) / Senior Resident (Forensic Medicine) to deal with MLC documentation and representation to court.
3. Develop a cadre of Forensic Nursing and post them in the emergency for round-the-clock frontline medico-legal service.[32]

4. Station an in-house police post for mitigating plausible violence and protection of emergency care providers. This would aid in better coordination of MLC documentation and legal services.

Health systems can personalise treatments, boost communication, and improve health outcomes by using healthcare data to construct holistic representations of patients. Suggestions:

1. Develop National Emergency Department Information System (EDIS)
2. Implement and integrate the computerised care delivery template, which will serve as clinical notes, registry, and surveillance
3. It will use the data for quality improvement initiatives and research.
4. Develop various emergency conditions registries such as cardiac arrest, poisoning, snake bite, and trauma registry.

The increasing cost of health services and the need for better use of available resources is a concern for healthcare providers. Consequently, there is a need to measure the efficiency of health care to determine if proper use of available resources is being made. The area of concern lies with the implementation of policies and procedures. There is

1. Need to evaluate the impact of interventions in terms of outcomes or processes and the underlying culture
2. Need to engage healthcare workers in the selection/development of measures to evaluate the safety and success of interventions
3. Organisations should identify a few valuable measures to be collected systematically.

Conclusion

In the highly sensitive area of the emergency department in a rural hospital, many factors may cause delays in the initiation of treatment. Also, more time may be taken for the documentation process of the medico-legal cases. An integrated approach to early assessment and recognition, early resuscitation, and management saves lives. There is a need for SPOs, policies, guidelines, and treatment protocols for medicolegal patients and teaching of the health care workers so that effective and timely care can be provided to people in need in the emergency department. Awareness regarding the importance and usefulness of medico-legal documentation among the general population, mainly among females, will help in patient cooperation and decrease the time taken for the documentation process.

More research is needed to assess various factors involved in the delay in starting treatment, like prehospital delay, effective triage process, human resources, transportation equipment, availability of beds, patient flow, and overcrowding. To study the patient population's perception and expectations, a large-scale survey is needed, maybe the whole population (census). Effective feedback mechanisms should be developed to gain insight into the prevailing patient safety culture and its improvement. The management and the hospital administration should take measures to strengthen the patient safety climate to decrease the existing gaps, define roles and responsibilities, and suggest interventions to support emergency/injury care.

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Tests of Normality							
		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Medicolegal documents		.227	800	<.001	.843	800	<.001
	18-41 Years	.217	330	<.001	.854	330	<.001
	42-65 Years	.230	470	<.001	.839	470	<.001
	Male	.202	478	<.001	.877	478	<.001
	Female	.316	322	<.001	.763	322	<.001
Starting of treatment		.191	800	<.001	.908	800	<.001
	18-41 Years	.168	330	<.001	.915	330	<.001
	42-65 Years	.174	470	<.001	.910	470	<.001
	Male	.191	478	<.001	.899	478	<.001
	Female	.193	322	<.001	.912	322	<.001
a. Lilliefors Significance Correction							

Table 4: K-S Nonparametric and S-W parametric test for normality of distribution

Table 5: Test of Homogeneity of Variance for Gender

		Levene Statistic	df1	df2	Sig.
Medicolegal documents	Based on Mean	68.603	1	798	<.001
	Based on Median	17.993	1	798	<.001
	Based on the Median and with adjusted df	17.993	1	549.163	<.001
	Based on trimmed mean	58.531	1	798	<.001
Starting of treatment	Based on Mean	.101	1	798	.751
	Based on Median	.096	1	798	.757
	Based on the Median and with adjusted df	.096	1	791.144	.757
	Based on trimmed mean	.101	1	798	.750

Table 6: Test of Homogeneity of Variance for Age Groups

		Levene Statistic	df1	df2	Sig.
Medicolegal documents	Based on Mean	.673	1	798	.412
	Based on Median	.509	1	798	.476
	Based on the Median and with adjusted df	.509	1	797.994	.476
	Based on trimmed mean	.920	1	798	.338
Starting of treatment	Based on Mean	.000	1	798	.991
	Based on Median	.319	1	798	.572
	Based on the Median and with adjusted df	.319	1	797.992	.572
	Based on trimmed mean	.006	1	798	.940

Table 7: Hypothesis Test Summary

	Null Hypothesis	Test	Sig. [a,b]	Decision
1	The median of the Starting of treatment equals 4.	One-Sample Wilcoxon Signed Rank Test	<.001	Reject the null hypothesis.
2	The median of Medicolegal documentation equals 4.	One-Sample Wilcoxon Signed Rank Test	<.001	Reject the null hypothesis.

3	The distribution of Starting of treatment is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.440	Retain the null hypothesis.
4	The distribution of Starting of treatment is the same across categories of Age.	Independent-Samples Mann-Whitney U Test	<.001	Reject the null hypothesis.
5	The distribution of Medicolegal documentation is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.011	Reject the null hypothesis.
6	The distribution of Medicolegal documents is the same across categories of Age.	Independent-Samples Mann-Whitney U Test	.263	Retain the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				