

Assessment of the Quality of Healthcare Services for Patients with Sensory and Physical Disabilities

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Abstract

I assessed the quality of healthcare service for patients with sensory and physical disabilities in Inland Empire, California. Quantitative analysis of the existing data with sample size of 36 online studies and 45 hospital patient records were used in the study. The results of the study showed that the highest proportion of healthcare staff have negative attitude towards patients with sensory and physical disabilities. I also observed that a significant high proportion of the members of the healthcare staff believed that patients with disabilities do not adhere to instructions (51%, $p = 0.03$) and are hard to be communicated with (65% $p = 0.03$). Also, I observed that there is a deficit in the facilities, staff and funds directed towards hiring staff and purchase of facilities for the patients with sensory and physical disabilities. I concluded that more resources should be channeled towards the acquisition of necessary facilities and hiring and training of the staff so as to enhance the quality of healthcare service delivered to patient with disabilities.

Keywords: Physical disabilities; Sensory disabilities; Quality healthcare service; Negative attitude.

1 Introduction

The Centers for Disease Control and Prevention approximates that about 20 % of Americans are affected with some form of disabilities [1], [2]. People with disabilities constitute those with physical, mental and sensory impairments, which affect their active participation in normal daily activities [3].

Patients with disabilities have various challenges in accessing health care service [4]. These challenges include the physical, medical equipment, and communication barriers [5], [6], [7]. The attitude of the healthcare staff towards the patients with disabilities also presents a challenge in the provision of quality

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health care services to the patients [8], [9], [10], [11]. Negative attitude of the staff towards the patients with disability presents a major barrier in the provision of health care service to this group of patients. As indicated by [6], patients with disability are frequently subjected to negative staff attitude. [6] observed that the lack of sufficient staff training on the relevant communication and techniques required in handling the patient with disability is the major cause of the negative attitude toward patients with disabilities. The various indicators of negative attitudes are presented in Appendix III below.

Appendix III: The negative indicators and related variables

Concepts	Indicators	Variables	Decision Level (working definitions)
Negative/positive Attitude	<ol style="list-style-type: none"> 1. Behavior 2. Opinion 	<ol style="list-style-type: none"> 1. The conduct of staff when interacting with patients with disability 2. The opinion of the staff regarding caring for patients with disability 	<p>Considered negative:</p> <ol style="list-style-type: none"> 1. If the staff neglects to acknowledge and attend to the special needs of the patients 2. If the staff consider caring for the patients with disability to be burdensome and complicated.

These challenges, when left unaddressed, result in disparities in the delivery of health care services to patients with disabilities [12], [13], [10], [14].

It is important for the federal and state governments to work towards addressing the disparity in health care provision to patients with disabilities. The potential disparities are based on the understanding that the resulting unfair difference from the challenges stated above can be avoided [15]. The disparity can be addressed by improving the access to care services and training the healthcare staff on skills on how to handle patients with various disabilities [1]. The various strategies and policies that have been put in place emphasize on the need to increase adaptive equipment and enhance professional ability and

specialized care for the patients with disabilities [16], [17], [18], [19]. However, bureaucracies, tedious procedural processes and prohibitive implementation costs affect the pace and the successful implementation of the proposed strategies and policies [20], [21]. There is a need, therefore, to evaluate the level of implementation of the proposed strategies so as to identify the potential challenges and areas for further improvement.

The assessment of the level of adoption of the proposed strategies and policies in the health care sector can be done through the evaluation of the quality of health care services for patients with disabilities. I assessed the quality of healthcare service for patients with disabilities with focus on those with sensory and physical disabilities by answering the following research questions:

- I. What is the trend in the proportion of patients with sensory and physical disabilities between 2010 and 2015?
- II. How does the healthcare staff perceive patients with sensory and physical disabilities?
- III. Are the healthcare facilities equipped with adequate infrastructure and staff to handle the needs of the patients with sensory and physical disabilities?

2 Research Design

I accomplished the goals of this study through quantitative analysis of existing data that I obtained from online databases and hospital records. Through this approach, I was able to efficiently carry out contextual assessment of the research questions based on data obtained from different sources.²² The existing data I used in this study were the hospital records and online studies. I obtained the hospital records from nine selected hospitals. The records I obtained were the annual internal records documented separately by the individual hospitals. The selection of the hospitals in this study was based on their willingness to participate in the study. I only considered the public and private hospitals found in Inland Empire, California. The selection of the online databases in this study was based on stringent inclusion criteria. I included only the databases with relevant primary data collected through a well-designed and executed statistical methodology associated with limited errors and high generalizability. I selected databases that had specific data on the proportion of patients with sensory and physical disabilities admitted in the Inland Empire, California hospitals and the healthcare staff perception of patients with disabilities. I considered only databases with data published between 2010 and 2015.

For this study, only those databases managed by the government or by nationally recognized institutions were considered. The databases that met the

study's selection included the Health Management database (Proquest), National Information Center on Health Services Research and Health Care Technology, Agency for Healthcare Research and Quality database and Medicare Provider Analysis and Review database. From the selected national databases, I only retrieved relevant data for Inland Empire, California. The use of more than one database on this research enabled me to overcome the challenge of unavailability of relevant data for Inland Empire.

3 Data Collection

The collection of the data was guided by the study's research questions so as to limit the occurrence of personal bias in the collection of data. From the hospital records, I obtained data on the number of patients with disabilities and the budgetary allocation towards development of infrastructure for the patients with physical and sensory disabilities.

I also obtained budgetary allocation from the yearly projection of hospital expenditure on infrastructure for the patients with physical and sensory disabilities. The data on the projection was obtained from the records documented by the individual hospital. I obtained data on existing facilities for the patients with physical and sensory disabilities from the selected hospital records. To facilitate the retrieval of these data from the hospital records, I developed leading questions for each research question. Some of the leading questions included the following: What is the total number of patients with physical and sensory disabilities? How many hospital staff is specially trained to handle the patients with physical and sensory disabilities? How many mobility and hearing aids are there? Based on these leading questions, I performed a manual search for the required data in the hospital records obtained from internal annual records document by each of the selected hospital. I used specific keywords to obtain the required data from the selected databases. The keywords included patients with disabilities, health care quality, health care disparity, healthcare staff attitude, staff perception and patients with sensory and physical disabilities. Based on these keywords, I was able to retrieve studies that answered research questions raised. Through these data retrieval criteria, I obtained a total of 36 online studies. To ensure that sufficient data for each research question was obtained, I carried out the collection of data in a back and forth manner with subsequent open coding and determination of relationships. This collection process was carried out until no new relationships were observed from the data.

3.1 Data Analysis

I coded the obtained data based on line-by-line open coding. The data that were open coded included the data from the online studies such as the various descriptions associated with the themes of interest as laid out in the study

objectives. This coding process resulted in several descriptive data groups, which I sorted out and grouped based on the research questions. I then tested the data in each group for normality using Kolmogorov Smirnov procedure. I analyzed the trend in the proportion of patients with sensory and physical disabilities using descriptive statistics through the determination of the percentages of the different cases of disabilities per year between the years 2010 to 2015. I determined the perception of the healthcare staff towards the patients with sensory and physical disabilities by first identifying the various themes regarding perception after which I expressed the frequency of the themes in the collected data in percentages. I determined whether healthcare facilities are equipped with adequate infrastructure and staff to handle the needs of the patients with sensory and physical disabilities by comparing the patient population and the available facilities. Based on this comparison, I obtained the percentage deficit in specific facilities and health care staff. I used correlation statistics to determine the impact of quality of health care service on the recovery rate of the patients with physical and sensory disabilities. I used Statistical Package for the Social Sciences {SPSS} version 23 software to conduct the data analysis. All analysis was carried out at 5% level of significance and the determination of the values that are significantly different at $p=0.05$ was done using the Tukey procedure.

4 Results

I evaluated a total of 45 hospital records and 36 online databases studies concerning health care provision to patients with physical and sensory disabilities. The selected data records were those between the year 2010 and 2015. The study outcome indicated that the major physical disabilities were associated with impaired movement with an average of 3300 cases per hospital. The major sensory disabilities that were established from retrieved hospital records was established to be vision and hearing impairment that contributed to an average of 1278 and 4600 cases per hospital respectively in every year. The trend in the proportion of patients with physical and sensory disabilities showed that the patients with impaired hearing made up the highest proportion of the hospital patients as indicated by a proportion of 44%, 47%, 39%, 45% and 44% for the years 2010, 2011, 2013, 2014 and 2015 respectively. From the year 2010 to 2015, the proportion of patients with physical disabilities was established to be 34%, 25%, 31%, 39% and 33% respectively. The proportion of the patients with hearing disabilities from 2010 to 2015 was established to be 16%, 13%, 15%, 12% and 11% respectively as shown in Figure 1 below.

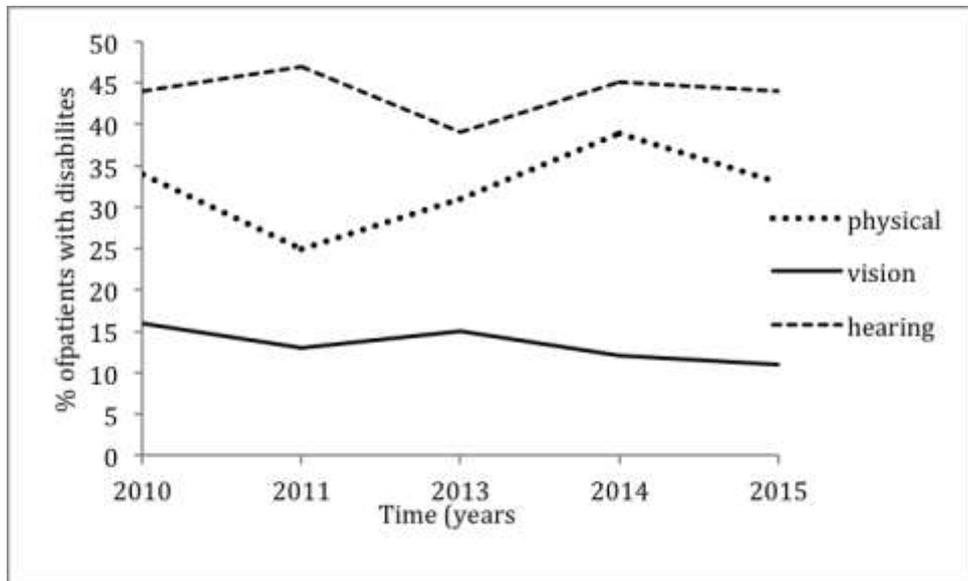


Figure 1: The trend in the proportion patients with physical and sensory disabilities

The attitude of healthcare staff towards the patients with physical and sensory disabilities

The outcome on how members of healthcare staff perceive patients with physical and sensory disabilities was assessed by establishing the percentage of healthcare staff that responded positively or negatively to five questions items on attitude. The first question item was on whether the healthcare staff regarded the handling of patients with physical and sensory disabilities to be easy. The results presented in Table 1 indicate that significantly high percentage of the members of staff do not think that it is easy to attend to patients with disabilities (57%, $p = 0.003$). The percentage of health care staff that regarded the handling of patients with physical and sensory disabilities to be easy was significantly low (39%, $p = 0.04$) compared to the proportion of the staff that regarded the easy of handling the patients with disabilities to be similar to that of normal patients (4%, $p = 0.01$). Regarding the second question item, significantly high number of staff members indicated that patients with disabilities do not adhere to instructions (51%, $p = 0.03$). The proportion of the staff that indicated that the patients with disabilities adhere to instructions (20%) and those that responded that adherence to instructions by the patients with disabilities is the same as for the normal patients (29%) was not significantly different at $p = 0.05$. The result on the third question item revealed that a significantly high percentage (65% $p = 0.03$) of the members of health care staff perceive the patients with disabilities to be hard to be communicated with. Regarding the fourth question item, it was established that the proportion of health care staff that apportion more time and attention to the patients with physical and sensory disabilities (46%) is not significantly different

from those that apportion equal time to the patient with disabilities as the normal patients (51%). The result on the fifth question item showed that a significantly high proportion of the healthcare staff members perceive that the patients with physical and sensory disabilities complicate their work (63%, $p = 0.004$) as shown in Table 1.

Table 1: Perception of the health care staff on patients with physical and sensory disabilities

Response	% Response rate		
	Yes	No	Same with normal patients
Easy to attend to	39	57	4
Do not adhere to instructions	51	20	29
Hard to communicate with	65	12	23
Give more time and attention	46	3	51
Complicate their work	63	10	27

Assessment of the facilities and staff suitability to handle the needs of patients with physical and sensory disabilities

I evaluated the existing data to determine whether the health care facilities in the study area are well equipped to handle the needs of patients with physical and sensory disabilities. The results presented in Table 2 indicate that the hospitals did not have sufficient facilities for patients with disabilities as indicated by average deficit of 66.67%, 33.33%, 62.92%, 40% and 71.43% in the number of wheelchairs, accessible toilets, specialist beds, voice announcement tools and Braille equipment per hospital respectively. The results also indicated that the hospitals have insufficient staff with expertise in dealing with patients with physical and sensory disabilities as indicated by the average deficit of 76.67%, 84% and 42.86% in the number of sign language interpreters, staff with knowledge of Braille information and hospital volunteer to escort patients with sensory impairment respectively. The results also indicated that there is an average deficit of 70% and 50% in the budgetary allocation to the purchase of facilities for patients with disabilities and hiring and training of staff on handling of patients with disabilities as indicated in Table 2.

Table 2: Facilities and staff suitability to handle the needs of patients with physical and sensory disabilities

Facilities			
	Average number per hospital	Average number required	% Deficit
Wheelchairs	25	75	66.67
Accessible toilets	10	15	33.33
Specialist beds	33	89	62.92
Voice announcements tools	6	10	40.00
Information sharing in Braille	2	7	71.43
Staff			
	Number	Ratio of the staff to patient	% Deficit
Sign language interpreters	7	30	76.67
Staff with knowledge of Braille information	4	25	84.00
Hospital volunteer to escort patients with sensory impairment	28	49	42.86
Budgetary Allocation			
	Average required amount	Average amount allocated	% Deficit
Purchase of facilities for patients with disabilities	\$500,000	\$150,000	70
Hiring and training of staff on handling of patients with disabilities	\$400,000	\$200,000	50

I also sought to evaluate how the quality of health care service affects the recovery rate of the patients with physical and sensory disabilities. I determined the quality of health care service by considering the attitude of the healthcare staff towards patients with physical and sensory disabilities and the facilities and staff suitability to handle the needs of patients with physical and sensory disabilities. The Pearson's correlation results indicated that there is a positive correlation

between the quality of health care service and the recovery rate of the patients with physical and sensory disabilities as indicated by the Pearson's correlation factor of $r=0.481$. The correlation was established to be significant at $p =0.043$ as shown in Table 3.

Table 3: correlation between quality healthcare service and patient recovery rate

		Quality of health service	Recovery rate
Quality of health service	Pearson's Correlation	1	0.481
	Sig. (2-tailed)		0.043
	N	45	45
Recovery rate	Pearson's Correlation	0.481	1
	Sig. (2-tailed)	0.043	
	N	45	46

5 Discussion

In this study, I aimed to assess the quality of healthcare service for patients with sensory and physical disabilities by evaluating the attitude of the healthcare staff towards the patients and assessing the facilities and staff suitability to handle the needs of patients with physical and sensory disabilities. It is evident from the study that the provision of quality service to the patients with sensory and physical disabilities is yet to be achieved. The study showed that the highest proportion of healthcare staff have a negative attitude towards patients with sensory and physical disabilities as indicated by high percentage of responses. These high percentages of responses suggest that the patients with disabilities do not adhere to instructions, hard to communicate with and complicate the work of the healthcare staff. The study also indicated that there is deficit in the facilities, staff and funds directed towards hiring staff and purchase of facilities for the patients with sensory and physical disabilities.

It is evident from the study results that a high proportion of healthcare staff has a negative attitude towards patients with sensory and physical disabilities. Negative attitude of the health care providers towards the patient leads to the

provision of poor quality service [23]. As observed in the study, the negative attitude is mainly associated with the fact that healthcare staff regard the handling of patients with disabilities to be complicated. According to [24], the ease of handling patient with disabilities depends on the preparedness and the expertise of the hospital staff. [25] also indicated that the handing of patients with sensory disabilities without the necessary training results in the provision of poor quality service. Based on the outcome of this study, the negative attitude of the healthcare staff towards the patients with disabilities is also associated with the perception among the healthcare practitioners that the patients do not adhere to instructions. It should, however, be noted that it is the responsibility of the healthcare provider to devise treatment and care plans that are suitable and well understood by the patient [26].

The inability of the patients to adhere to the treatment instructions has been mainly linked to the failure of the healthcare staff to communicate well to the patient [27]. According to [28] one of the impediments to the provision of quality health service is the poor communication between the patient and the healthcare provider. As indicated in the study, the high percentages of healthcare staff lack the required expertise to communicate with patients with disabilities. As indicated by [27], it is important for the healthcare providers to develop the required skills on communication to enable them discharge quality healthcare service. [29] indicated that poor communication impact negatively on the quality of the healthcare service by impeding the exchange of information between the patient and healthcare provider. Therefore, the management should put in place strategies such as training the staff on how to communicate and handle the patients with sensory and physical disabilities.

The study has also shown that there is deficit in the provision of facilities for the patients with sensory and physical disabilities. The findings of this study corroborate those of early study by People [30], which indicated that there is a disparity in the provision of hospital equipment for the patients with disabilities. Studies have suggested that the healthcare managers should direct more resources towards the acquisition of necessary facilities and hiring of staff to meet the needs of patients with sensory and physical disabilities [1], [31], [12]. The outcome of this study supports the recommendation of the mentioned studies [31], [12], considering the outcome of the study, which indicates that the managers do not allocate sufficient funds to meet the needs of the patients with disabilities.

6 Conclusion

It is evident from the study that the quality of healthcare service for patients with sensory and physical disabilities needs to be enhanced with particular emphasis on training of the staff and allocation of more resources to meet the needs of patients

with sensory and physical disabilities. According to the study, the current situation is marked by insufficient allocation of funds towards hiring more staff and acquisition of appropriate facilities despite the evidence that the hospitals are not adequately staffed and lack enough facilities. It is, therefore, recommended that the managers of health care facilities should direct more resources towards the acquisition of necessary facilities and hiring of staff to meet the needs of patients with sensory and physical disabilities.

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