

A STUDY ON FACTORS INFLUENCING PURCHASE INTENTION OF MEDICAL DEVICES IN SIVAGANGA DISTRICTS - TAMIL NADU

Mr. H. Prem Kumar*
Dr. R. Prabusankar**

ABSTRACT

The market for consumer-focused medical devices used at home is expanding as a consequence of technological developments and rising health awareness. This study investigates the mechanisms through which specific package characteristics affect consumers' propensity to purchase home healthcare equipment. This research attempts to identify and analyse numerous causes in the purchase of medical equipment for the customer's daily life. A detailed series of hypotheses was developed, and a technique for evaluating questions was presented, based on a thorough examination of the related literature and theoretical model. The respondents are from Sivaganga district in Tamil Nadu. The data collecting method employed was probability sampling in this research study. The data have been collected from the patients who are all suffering from the diabetics, fever and cold and analysed in this study. Medical equipment and devices namely Thermometers, Blood Pressure Meter, oximeters, Dr Morepen, glucometers, vaporiser and nebulizers have been considered for this study. The population for this research study is 465 and 390 samples were collected from the medical device users and doctors. Factor Analysis and Friedman Test have been applied in the analysis part and manipulated from the Software SPSS version 21. It is advantageous to sales division of the business as well as different distributors which are affiliated with medical equipments and devices. The policymakers and strategy makers of the manufacturing firm will be getting the benefits from this study.

Keywords: Medical Devices, Purchasing Intention, Consumer Behaviour, Home Health.

Introduction

Hospitals, medical equipment, outsourcing, telemedicine, medical tourism, health insurance, and other related industries make up the Indian healthcare industry. In terms of both employment and income, healthcare has surpassed all other industries in our nation today. To meet the demands of the expanding market, the need for medical equipment is also expected to grow substantially. The newest medical technology may significantly increase the productivity, efficiency, and processes as a doctor running his own practise. However, a customer needs to take in mind the following things before making the buying decision.

Examining the warranty options before buying medical equipment is a key consideration. We have to opt for a comprehensive warranty package that includes equipment maintenance coverage. If the machinery or equipment gets break down, the warranty will protect customers from the risk towards high service expenses. The extra costs for this warranty are very reasonable. Nowadays, many people are suffering from the diabetics, cold, cough, fever and so on and they are taking first aid in their home itself. Generally, home medical equipment is only regulated by ease of use if patients have prescription from their doctors for it. It is necessary to have a doctor's prescription for buying medical equipment, like oximeter and a home medical equipment provider may be suggested by the doctor, or the patient may do their own research. Hence, this study made an attempt to conduct the survey about the buying behaviour towards medical appliances at home.

* Ph.D. (Part-Time) Research Scholar, D J Academy for Managerial Excellence (An Exclusive B-School), (Affiliated to Bharathiar University), Coimbatore, Tamil Nadu State, India.

** Professor, D J Academy for Managerial Excellence (An Exclusive B-School), Coimbatore, Tamil Nadu State, India.

Review of Literature

Nearly one hundred articles have been published in reputed journals and studied for this part. Numerous research studies indicate that the customers as their emphasis fail to clearly include numerous customer constructs which are crucial for understanding the consumer holistically, particularly in the context of customer purchase intention.

Purchase intention, as defined by Fandos and Flavian (2006), is the implicit promise made to oneself to repurchase the product on subsequent trips to the store. Purchase intention, in the words of Huang, R (2012), is the possibility that a buyer will make a certain product purchase; the higher the purchase intention, the higher the purchase probability. The mix of different causes that make up a customer's buying intention. There is a lack of a well-organized, thorough study that highlights the connections between these causes and the consumer buy intention in the literature on the factors that influence customer purchase intention.

To Keep an Eye on the Health Instruments

As a result, people now understand that how crucial it is to monitor regularly their health since doing so that it can help them avoiding serious health issues. There are gadgets that help with basic health parameter monitoring, reducing time and effort spent on recurrent clinic visits. The usage of medical gadgets has also become even more important with the development of telemedicine since patients may now do simple tests at home and share the findings with their physicians. The researcher has identified six medical equipments' which are vital to monitor the health conditions so that everyone at home should be ready to take all the necessary safety measures.

- **Modern Thermometers:** The device which is contactless has become a universal necessity. With the use of contactless thermometers, one may take a person's temperature without actually touching them. This gadget has been regarded as one of the finest methods for contactless temperature checking due to experience, particularly with COVID-19 viruses that transmit by physical touch. Contactless thermometers are also simpler to read for results than mercury-filled thermometers.
- **The Pulse Oximeter:** It works is to check the oxygenation level of your blood. During the epidemic, having it was a must. Monitoring blood oxygen levels is critical for individuals with the COVID-19 infection. This device is widely accessible, and some models have a pulse-reading feature that offers extra health-related data.
- **Glucometer:** All diabetic individuals must have a Glucometer in order to monitor their blood glucose levels on a regular basis. All users, even elderly patients, may easily operate this gadget due to its portability. To prevent any serious health issues in the future, it is essential to regularly monitor your blood glucose levels.
- **Blood Pressure Monitor:** Due to the epidemic, many people are not engaging in any physical exercise. Your blood pressure levels can be significantly impacted by elevated stress, inactivity, obesity, and a salt-rich diet. Digital blood pressure monitors are a useful tool to have at home to maintain a healthy blood pressure and pulse. A blood pressure monitor is simpler to use than a standard sphygmomanometer, which is typically used in clinics, because it is digital and displays readings right away.
- **Vaporisers:** When coping with severe congestions, colds, coughs, and nasal blocks, vaporizers might be helpful. This aids in controlling your chest and nasal congestion and effectively managing symptoms to combat any viral fever, including one brought on by the COVID-19 virus.
- **Nebulizers:** Nebulizers are used to swiftly and directly provide oxygen to the lungs. The gadget is strongly advised in situations where you need urgent relief to make sure your lungs receive enough oxygen.

Objectives of the Study

- To analyse the consumers purchase intention of the medical devices for home usage.
- To examine the factors influencing the customers for daily usage.
- To propose different strategies and managerial implications for the medical devices' companies based on the findings.

Methodology

Two sections of the questionnaire have been designed by the researcher. Part A of the questionnaire contains the potential respondents' name, gender, age, occupation, level of education as

their demographic information. The part-B includes various topics related to the dependent and independent variables of the study. With 1 being "strongly disagree," to 5 being "strongly agree", each statement was provided as a five-point Likert scaled answer question.

The data sources are either primary or secondary in nature. Hence, the study adopted the methods of analytical and descriptive in nature. The probabilistic random sampling technique has been used for the survey. Medical devices which are being used by clients namely patients, hospitals, and physicians had been the part of the survey process. 390 samples were made up the entire sample. A significant area from Sivaganga district has been selected for this study. Hospitals (both public and private), patients (Diabetic, fever cold and cough), and physicians make up the sample unit. Initial sample size was 390 considered for the patients; and 120 doctors.

Socio-Economic Status of the Respondents

The profiles of 390 respondents who have purchased home usage medical devices were taken for this study. The details of the respondents have been shown in Table - 1.

Table 1: Demographic Profile of the Respondents

Personal Background	Particulars	Number of Respondents	Percentage
Gender	Male	234	60
	Female	156	40
	Total	390	100
Age	0-14 years old	26	6.7
	15-24 years old	53	13.6
	25-64 years old	92	23.6
	65 years old	219	56.2
	Total	390	100
Type of Health Products	Pharmaceutical Products	179	45.9
	Supplements	19	4.9
	Organic Remedies	12	3.1
	Medical Devices	110	28.2
	Health & Beauty	6	1.5
	Sports and Fitness	10	2.6
	Both a and d	54	13.8
Total	390	100	
Medical Devices Usage purpose	Diabetics	154	39.5
	Monitor body temperature / Nebulizer	70	17.9
	Blood oxygen levels	53	13.6
	Heart rate	84	21.5
	Safe and effective way	21	5.4
	Reduce the regular visit to hospital	8	2.1
	Total	390	100
Medical device Brand	AccuSure	23	5.8
	Novartis AG	9	2.3
	IS Indo Surgicals	17	4.3
	Dr Morepen	112	28.7
	Apollo Product	147	37.69
	Omran	52	13.3
	Philips	20	5.12
	Beurer	0	0
	One touch Verio Flex Blood	0	0
	Meditive	4	1.02
	Control D	2	0.51
	Newnik	1	0.25
	Generic	3	0.76
Total	390	100	

Source: Primary Data

Table - 1 shows that about the majority of the respondents are male (60%) and 40% are the female. The age of the respondents are the majority level (in 56.2%) above the 65 years old and least level is (6.7%) within 14 years old. The below 14 age children can use the Nebulizer and temperature for fever, cold and cough purposes. Type of the health product, the majority level (45.9%) is falls on with Pharmaceutical products and many people have chosen the medical devices and pharmaceutical products (13.8%), then usage level of the medical devices (28.2%).

The purpose of the medical devices for diabetics (39.5%) is the majority level followed by the heart rate (21.5%) majority level. The least people listed that to reduce the regular visit to hospital. The medical devices brand are topmost place is kept by Apollo Product for Glucometer (37.69%), Dr Morepen (28.7%).

Statistics of the Demographic Profile

In statistics, the measurement of variability known as the standard deviation (SD) is frequently utilised. It demonstrates how different things are from the norm (mean). While a high SD shows that the data are dispersed throughout a wide range of values, a low SD suggests that the data points tend to be near to the mean. Hence the table stated the mean, standard deviation is normal.

Table 2: Statistics

		Type of the Health Product	Age of the Customer	Gender	Medical Devices Usage Purposes
N	Valid	390	390	390	390
Mean		2.7256	1.2436	1.4000	2.4154
Standard Error of Mean		.10572	.02176	.02484	.07229
Standard Deviation		2.08782	.42980	.49053	1.42752
Range		6.00	1.00	1.00	5.00

Source: Primary Data

The above table stated that mean value is more than 1.2 for the independent variables age, gender, type of the health product and medical devices usage.

Influencing Factors of Purchase Intention of Medical Devices among the Customers– Factor Analysis

The researcher has identified 32 items which are influencing the purchase intention of medical devices among the customers in the Sivaganga district of Tamil Nadu. In order to identify these 32 influencing factors inspired them to do purchase the medical equipment, the factor analysis has been applied. It is a multivariate technique that is helpful to reduce the large number of variables into group of factors. Factor analysis extracts maximum common variance from all variables and puts into a common score.

Influencing of Purchase Intention of Medical Devices among the Customers – Kaiser-Meyer-Olkin (Kmo) and Bartlett's Test

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test is applied to measure the adequacy of the sampling. The influence of purchase the medical devices by the customers has been tested on 32 attributes.

Table 3: KMO and Bartlett's Test^a

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.947
Bartlett's Test of Sphericity	Approx. Chi-square	24125.228
	DF	496
	Sig.	.000
Based on correlations		
Source: Primary Data		

Table - 3 In order to test the significance level of the variables, the correlation matrix have been calculated by using Bartlett test and the output of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.947 which shows that the degree of variance among the variables is quite high. Hence it is determined that the factor analysis can be applied.

Influencing of Purchase Intention of Medical Devices among the Customers - Principal Components Analysis

The principal component analysis has been administered for grouping the factor of purchase intention. It is a method of data reduction. Moreover, the proportion of variance of the particular item

becomes a common factor and it called communalities. As per the principal component analysis the value of communality is consider as one. Each variables are placed in compound column. The extraction columns have the communalities value. The attributes have the value less than 0.5 which defined the variables are not fit for the factor solution and if possible, may be dropped from analysis. Communalities are extracted by using this formula,

$$H_i^2 = l_{i1}^2 + l_{i2}^2 + \dots + l_{im}^2$$

(where $i=1,2,\dots,p$ and l =matrix of factor loadings)

Table 4: Influencing of Purchase Intention of Medical Devices among the Customers - Principle Component Analysis

Particulars	Raw	
	Initial	Extraction
To be More Effective and efficient	1.000	6.33
The medical Device allows the respondents to complete their tasks easily and quickly	1.000	7.58
It ensures the patient safety	1.000	6.77
It does not require physical effort for use the product	1.000	5.98
Affordable price	1.000	5.32
It is not associated with large error possibility in its use	1.000	9.66
It allows the customers to ensure their needs and wants	1.000	9.54
User Friendly and pleasant to use	1.000	7.21
To facilitates the performance of my tasks	1.000	8.55
It Allows to recover the mistakes easily and safely	1.000	8.74
It does not require mental effort to use it	1.000	8.33
Ease, comfortable and simple to use	1.000	7.21
To feel security in use it	1.000	9.63
The medical devices are good brand and standardised with ISO	1.000	7.64
The consumer feels to need to have it in their work place	1.000	8.36
To become a skilful with it	1.000	9.11
It like to use it frequently and perform my work	1.000	5.17
To learn about the device easily and quickly	1.000	5.39
The dimensions of the devices are adjusted	1.000	9.47
Clear instruction and explanation about the devices is given	1.000	6.72
To easily remember how to use it	1.000	5.31
It helps to regulate my daily work process	1.000	4.98
Requires few steps to accomplish my work	1.000	6.01
It helps to regulate my work easily	1.000	7.63
The Warranty and Guarantee attached with the devices	1.000	6.71
To recommend to the friends, neighbour and so on	1.000	6.98
It allows to complete tasks in a logical sequence	1.000	6.28
Clear instruction and explanation about the devices will be needed more	1.000	6.27
The appearance of the device is adjusted	1.000	7.21
It would be recommended it to buy once again	1.000	5.33
Reliability and durability	1.000	6.87
Clear instruction and explanation about the devices will be needed more	1.000	5.69

Source: Primary Data

Table - 4 shows the variance of the 32 variables ranging from 0.5 to 0.9. It indicates that 32 variables exhibit considerable variance. Hence, it is concluded that all these 32 variables can be acceptable of segmenting themselves based on predominant value as well as with respect of influence factors of the purchase intention of the customers.

Influencing Factors of the Purchase Intention of the Customers – Total Variance Explained

This step explains the number of factors to be derived. The role of thumb is applied for choosing the number of factors for "Eigen values" is greater than the unity is taken by using Principal Component Analysis method. When a correlation matrix is used, the variance proportion explained by the j^{th} factor is calculated as follows

$$\frac{\hat{l}_{1j}^2 + \hat{l}_{2j}^2 + \hat{l}_{pj}^2}{\text{tr}(R)} = \frac{\lambda_j}{\text{tr}(R)}$$

When a covariance matrix is used, the proportion of variance explained by the j^{th} factor is calculated as follows:

$$\frac{\hat{l}_{1j}^2 + \hat{l}_{2j}^2 + \hat{l}_{pj}^2}{\text{tr}(S)} = \frac{\lambda_j}{\text{tr}(S)}$$

Notation: l - matrix of factor loading, λ_j - j^{th} Eigen value, $\text{tr}(R)$ - trace of correlation matrix, $\text{tr}(S)$ - trace of covariance matrix.

The number of extracted factors, whose total should be equal to the number of items submitted to factor analysis, is actually represented by eigen value. The list of factors that may be extracted from the analysis is shown next, along with each factor's eigen values.

The Eigen value table has been divided into three sub-sections:

- Initial Eigen Values
- Extracted Sums of Squared Loadings
- Rotation of Sums of Squared Loadings.

For the analysis and data interpretation drives the researcher has concerned only with Initial Eigen values as well as the Extracted Sums of Squared Loadings. The presence of eigen values greater than 1 is necessary to determine how many components or factors are expressed by a certain set of variables.

Table 5: Influence Factors of the Purchase Intention of the Customers – Total Variance Explained

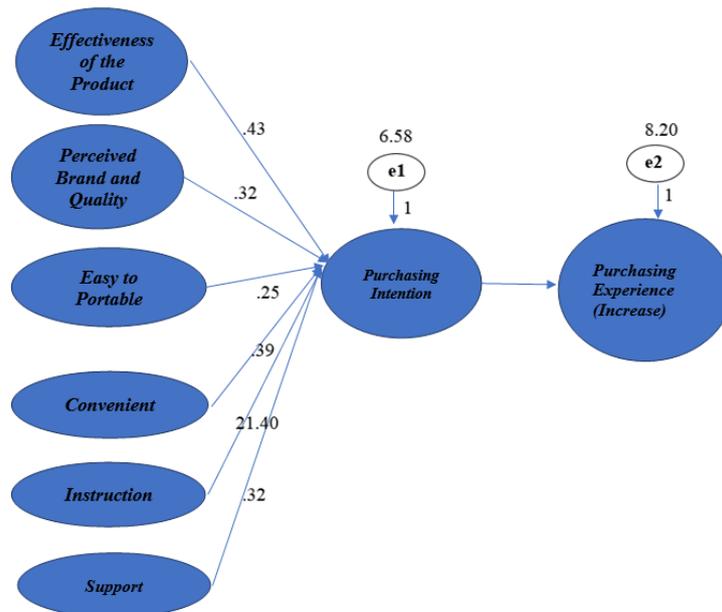
Initial Eigen Values ^a			Extraction Sums of Squared Loadings		
Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
49.358	62.226	62.226	49.358	62.226	62.226
12.845	16.194	78.420	12.845	16.194	78.420
6.423	8.098	86.518	6.423	8.098	86.518
1.658	2.090	88.607	4.587	24.141	54.777
1.426	1.798	90.405	4.368	22.990	77.768
1.048	1.322	91.727	2.825	14.869	92.637
.817	1.030	92.757	1.880	15.667	78.094
.653	.823	93.581	1.572	13.098	91.191
.491	.620	94.200			
.457	.576	94.776			
.430	.543	95.319			
.418	.527	95.846			
.366	.462	96.307			
.331	.418	96.725			
.294	.370	97.095			
.291	.367	97.462			
.248	.313	97.775			
.222	.280	98.055			
.199	.251	98.306			
.188	.237	98.543			
.176	.222	98.764			
.159	.201	98.965			
.138	.174	99.139			
.130	.164	99.303			
.107	.135	99.438			
.098	.124	99.562			
.084	.106	99.667			
.074	.093	99.760			

The medical Device allows the respondents to complete their tasks easily and quickly						725		
It ensures the patient safety						.581		
To learn about the device easily and quickly						.497		
To easily remember how to use it						.577		
To become a skilful with it						.874		
The weight of the device is adjusted							.981	
The appearance of the device is adjusted							.652	
It like to use it frequently and perform my work							.781	

Source: Primary Data

The table - 6 explained that each variables were segregated by eight groups and the predominant constructs are purchase intention such as Purchase Intention (6), Purchase Experience (5), Instruction (4), Perceived Brand and Quality (4), Ease to use (4), Convenient (3), Effectiveness of the Product (3), Support (3).

Figure 1: Construct Model of the Purchasing Intention of the Medical Devices among the Customer



Source: Primary Data

Here the variables are effectiveness of the products, perceived brand quality, ease of use, convenient, instruction, support will influence the purchase intention of the customers and finally it will increase the consuming the product again and again. The convergent validity has satisfied with the variables.

- Purchase Intention:** It would be recommended it to buy once again (.589), To recommend to the friends, neighbour and so on (.641), It helps to regulate my daily work process (.542), The consumer feels to need to have it in their work place (.733), to feel security in use it (.936), the dimensions of the devices are adjusted (.563). Above the statements are said to be "Purchase Intention".
- Purchase Experience:** It allows the customers to ensure their needs and wants (.747), It helps to regulate my work easily (.967), To facilitates the performance of my tasks (.781), It does not require physical effort for use the product (.598), It does not require mental effort to use it (.576). The segregation of this item is said to be as "Purchase experience".
- Instruction:** The Warranty and Guarantee attached with the devices (.871), Clear instruction and explanation about the devices is given (.957), The medical devices are good brand and standardised with ISO (.724), Clear instruction and explanation about the devices will be needed more (.621). The variables are get constructed and to be named as "Instruction".

- **Perceived Brand Price and Quality:** Affordable price (.768), Reliability and durability (.568), It allows to complete tasks in a logical sequence (.547), It is not associated with large error possibility in its use (.538).
- **Ease to use:** Ease, comfortable and simple to use (.482), User Friendly and pleasant to use (.574), requires few steps to accomplish my work (.511), It Allows to recover the mistakes easily and safely (.866).
- **Convenient:** To be More Effective and efficient (.921), the medical Device allows the respondents to complete their tasks easily and quickly (.725), It ensures the patient safety (.581).
- **Effectiveness of the Product:** To learn about the device easily and quickly (.497), To easily remember how to use it (.577), To become a skilful with it (.874).
- **Support:** The weight of the device is adjusted (.981), The appearance of the device is adjusted (.652), It like to use it frequently and perform my work (.781).

Table 7: Model Fit Indices

Chi-square Value	P-Value	GFI	CFI	RMR	RMSEA
5.149	0.050	0.91	0.93	0.06	0.03

Source: Primary Data

The Chi-square value is 5.746 and it is significant elucidating that the model has excellent fit. GFI (Goodness of Fit Index) is 0.91 and CFI (Comparative Fit Index) is 0.93 that reveal excellent fit. RMR (Standardized Root Mean Residual) is 0.06 and RMSEA (Root Mean Square Error of Approximation) is 0.03 that show excellent fit.

The Doctors Opinion about Purchase Intention-Friedman Test

In order to examine the opinion of doctors about purchasing intention of the medical devices, the researcher has categorized 13 variables to often use this product, product quality, medical devices design, effectiveness, ease of use, purchase intention, purchase experience, price, result outcome, instruction, after purchase, support and fit to their health conditions, customer satisfaction. In order to analyse the doctor's opinion about To often use this product , product quality, medical devices design, effectiveness, ease of use, purchase intention, purchase experience, price, result outcome, instruction, after purchase, support and fit to their health conditions, customer satisfaction. The respondents have given their responses by means of rank. In order to assess the respondents' priority for these variables the researcher has administered the Friedman test.

Friedman Test is a non-parametric test used to find out the mean rank of each variable. Based on the mean rank it is identified that the priority is given to various opinion followed by the respondents. The null hypothesis is that there is no significant difference among the ranks provided by the respondents.

Table 8: The Doctors Opinion about Purchase Intention-Friedman Test

Particulars	N	Mean	Standard Deviation	Mean Rank	Asy Sig.
To often use this product	120	3.6000	1.56898	6.92	0.00
Product Quality	120	3.6744	1.52751	7.09	
Medical Devices Design	120	3.5923	1.56617	6.91	
Effectiveness	120	3.5769	1.57355	6.84	
Easy to use	120	3.5103	1.58841	6.73	
Purchase intention	120	3.5590	1.59864	6.84	
Purchase Experience	120	3.7205	1.53497	7.19	
Price	120	3.6256	1.56385	6.98	
Result Outcome	120	3.6205	1.57571	6.96	
Instruction	120	3.5872	1.57465	6.89	
After Purchase	120	3.8923	1.45319	7.52	
Support and fit to their health condition	120	3.6590	1.56409	7.09	
Overall Customer Satisfaction	120	3.6641	1.54537	7.04	

Source: Primary Data

Table 8 indicates that P value of 0.00 which is less than the ideal p value of 0.05 and the null hypotheses is rejected at five percent significance level. Hence it is concluded that there is a significant difference between the mean ranks towards the doctors' opinion. Based on the mean rank, it is found that respondents have the importance of "after purchase the medical device", followed purchase experience is good with the medical device".

Findings and Suggestions

One of the numerous lessons learned from this epidemic is that people cannot completely rely on others for maintaining their good health. Individually, as a family, and as a group, people are accountable for their eating habits, personal hygiene routines, and methods of avoiding discomfort or disease. It is crucial to rely on key medical gadgets to monitor the fundamental health indicators that can warn the customers on any irregularity in the physical state in addition to frequently assessing themselves with medical professionals. For instance, if they have the correct tools, the consumers may quickly prevent and identify significant non-communicable chronic illnesses including arterial hypertension, cardiac arrhythmias, and diabetes mellitus. Additionally, they must have the bare minimum of medical supplies to provide first aid or determine whether a trip to the hospital is necessary for consultation.

About the doctors and people opinion listed out from the above tables, it is simple to use the equipment which is completely automated, the blood pressure monitor collects their data and maintains track of their health condition whenever you like. This home monitor rapidly and conveniently measures the pressure. With the use of the Glucometer, diabetes, one of the effects of obesity, may be managed. People with diabetes or those suspected of having the condition may now check their blood sugar levels due to this gadget. Pharmacy brands are available in variety in the market.

They contain a hole for inserting tiny, disposable test strips and a screen that displays the blood sugar level (glucose measurement). It comes in the form of "pen" that uses a mechanism to prick fingers with needles and creates a little drop of blood when bit, which is then applied to a test strip.

When a person is suffering from fever, medical thermometer is the first medical device to act. It enables you to check the body temperature and gauge the severity of hyperthermia so that you can get medical help if required. A medical thermometer is much more crucial for a pregnant lady, kid, or infant.

People are using many devices in their daily life which is easy and comfort with their routine practice. Doctors are highly recommending the above medical devices and advise their patients to purchase these devices and keep in every home. There are many brands being recommended by the doctors through word of mouth namely Apollo, Dr Morepe, Omron, Philips and ease to use.

Conclusion

According to the survey, the customers choose branded products with a strong social reputation when purchasing medical equipment. Price is not a significant factor for the responders in this study, though it may have been. The responses are from the same people who were utilising pricey equipment for different purpose. Additionally, our responders included hospitals and private doctors who could readily afford Glucometers.

Patients who receive care at home are more comfortable and convenient than those who receive it at a hospital. Care recipients can stay independent and mobile and need to say thanks to technological improvements. For instance, telemedicine and wireless monitoring tools enable medical professionals to see and speak with patients receiving home care from a distance. Robotics and technology developments have made it possible to offer care more automatically and with less need on human interaction. The cost of the treatment will be less when compared to the home usage like ventilator, BP check up, oxygen-dependent children, congestive heart failure in the elderly and so on. Even in sometimes it will be consider for the patients safety because of the use of medical equipment at home involves special difficulties because of the environment's basic differences from the clinical setting, many of which have the potential to affect patient safety. A gadget used at home has to be appropriate for the caregiver's and care patient's educational background, emotional stability, physical and psychological capabilities, way of life, and surroundings. Medical professionals routinely recommend equipment for home usage. The optimum brand or model of a machine for a certain patient in his or her home setting may not be taken into account by a doctor, or the doctor may lack the necessary expertise to make this kind of judgement. A doctor also has no authority over the gadget that is given to the patient. Instead, the patient can be dependent on a provider of medical equipment, who might favour one brand or type of gadget over another.

At finally the author has concluded in his study that medical equipment is increasingly being used in homes. The use of medical equipment at home has given patients a number of advantages, including enhanced quality of life and financial savings. However, home usage also comes with certain hazards and difficulties. The Food and Drug Administration (FDA) is actively ensuring the safety and secure use of medical devices at home through the Medical Device Home Use Initiative.

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