

Utilization of health services in Tenali Mandal, Andhra Pradesh- A cross-sectional study

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ABSTRACT

Introduction: India has a plurality of health care with different systems of medicine delivered by government and local bodies in hospitals and clinics. Public hospitals provide 60% of all hospitalizations, while the private sector provides 75% of all routine care. Utilization is the actual attendance by the members of the public at health care facilities, which measures the number of visits per year or the number of people with at least one visit during the previous year, serves as an important tool and acts as a guiding path in understanding disease profile and also helps resource allocation. **Materials and Methods:** A cross-sectional study was done using the National Pathfinder survey (stratified cluster random sampling) to know the health care utilization, profile, and pattern in Tenali Mandal, Guntur, Andhra Pradesh. **Results:** The study sample comprised of 1,500 subjects who were equally divided among 5 age groups. Out of 1,500 participants, 52.8% were females and 47.2% were males. In total, 71.7% of the study participants have utilized health services, with majority of them (44.5%) had availed services within the last 6 months with prime reason of fevers (15.8%), while the main barrier for not seeking care was distance (17.03%), almost an equal proportion of the population sought care for their problems through home remedies and over-the-counter. **Conclusion:** There is an utmost need to minimize barriers of utilizing by making them aware of the health problems, so that they develop a positive attitude toward health care utilization. Therefore, knowledge of utilization of health services and associated factors is important in planning and delivery of interventions by the primary care physicians to improve health services coverage.

Keywords: Barriers, health care utilization, health services, healthcare delivery system

The fundamental principle of equity is equal treatment for all socio-economic groups, irrespective of their ability to pay, as well as the gender with equal needs.^[1,2] Studies have shown two forms of inequity; social inequity is because of poverty, ethnicity, and lack of education, while spatial inequity arises owing to the place of residence, such as rural, urban, hilly, and forest areas, which effect on access to health care.^[3,4] The measure to gauge equity is to assess the distribution of opportunities in health care system suggesting a shift to measure social and spatial barriers of morbidity and mortality,

and health-seeking behavior can be used as indicators to assess equity.^[5]

Health care utilization is the point in health systems where patients need to meet the professional system. It is well known that apart from need-related factors, health care utilization is also supply induced, and thus, strongly dependent on the structures of the health care system, and positive health care seeking behavior of an individual is influenced by the factors such as accessibility, affordability, and availability of health care services. India has a plurality of health care with different systems of medicine delivered by government and local bodies in hospitals and clinics. Public hospitals provide 60% of all hospitalizations, while the private sector provides 75% of all routine care.^[6-8]

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Changing dynamics in the health-care system as well as the role of health care personnel requires an authenticated and well-planned demographic data with reference to health as the demographic characteristics of the population are of fundamental importance because they define who receives care.

Socio-demographic data on health act as a guiding path in understanding disease profile to primary health care physicians i.e., doctors, nurses, Ayush workers, Anganwadi teachers, and emergency caregivers as they are the first persons to come in contact with the public at the local level. Understanding data on health gives an opportunity for primary care physicians to know the prevalence, trends of disease occurrence, care sought by the community, and also the economic impact of health, thereby providing primary health care physicians to establish well-balanced care.^[9]

Utilization is the actual attendance by the members of the public at health care facilities, which measures the number of visits per year or the number of people with at least one visit during the previous year, serves as an important tool for health policy decision-making.^[10] In much of the literature, the terms demand and utilization are used almost synonymously; economists almost invariably use the term demand (meaning utilization) in their studies of the dental care market. Hence, the aim of the present study is mainly focused to determine the utilization of health care services in Tenali Mandal, Guntur (Dist.), Andhra Pradesh.

Objectives

- To document self-reported general health diseases that the population suffered in recent times.
- To know the type of service received, place, avenue, and personnel involved in the delivery of health services.
- To know the factors influencing the pattern of health care utilization.

Materials and Methods

A cross-sectional study was done to know the general health care utilization, profile, and pattern in Tenali mandal, Guntur, Andhra Pradesh.

Study area

According to 2011 census, Tenali mandal of Guntur district has a total population of 2,40,031 with an average sex ratio of 1,024; thus, for every 1,000 men, there are 1,024 females while 68.7% people lives in urban areas, 31.3% in rural areas, and the average literacy rate stands at 79.89% with 1,74,711 literates.^[11] There are 9 villages, 2 peri-urban, and 1 town present in the Tenali mandal and following National Pathfinder survey 4 sites in 4 directions i.e., north, south, east, and west are taken from urban area and one site in any of the directions from each of the 9 villages and 2 peri-urban areas were selected for the present study.

Study population

Both male and females of age groups, 5, 12, 15, 35–44, and 65–74 years were considered as these age groups reflect significant periods of life cycle.

Sample size calculation

All the five age groups were selected from each site of 4 urban, 2 peri-urban, and 9 rural sites where 20 individuals from each group i.e., a total of 100 individuals from each site were selected resulting in sample size of 1,500, and for the age groups of 5 and 12 years, the questionnaire is administered to their parents/guardians.

Each site 5 age groups = 5×20 individuals = 100

15 sites = 100×15 = 1,500 sample size

Sampling technique

National pathfinder survey (Stratified cluster random sampling).

Inclusive criteria

- 1) Both male and female subjects of WHO recommended age groups.
- 2) Subjects who are present on the day of the study.

Exclusive criteria

- 1) Non-co-operative and mentally challenged.
- 2) Who are non-residents of Tenali mandal.

Ethical clearance

Ethical clearance was obtained from the ethical committee of SIBAR institute of dental sciences with IEC protocol no: Pr. 35/IEC-SIBAR/CIR/15 A, and informed consent were obtained from all the study participants prior to the start of the study, where the subjects are well ensured of the confidentiality of their responses.

Scheduling

The study was done between the months of July 2017–September 2017, where 20–25 subjects was interviewed per day while 15 min of duration were taken to gather information, per person.

Formulation of questionnaire

A pretested interviewer-administered questionnaire was used along with BG Prasad's classification for socioeconomic status owing to its applicability in both urban and rural areas, which is mainly depending on per capita monthly income.^[12]

Evaluation of psychometric properties of the questionnaire

Initially, face validity was tested that signified the validity of the question and adequate representation of each and every aspect that totally balance the coverage of the issue. Further, content validity was checked to know whether the questionnaire covers

the domains to be measured and it was done by quantifying seven expert's degree of agreement regarding the content relevance of the questions from the Department of Public Health Dentistry.

It was calculated by the formula:

Calculation of content validity ratio (CVR)^[13]

$$CVR = n - N/2/N/2$$

Where n is the number of experts who gave a rating of essential for an item

N is the total number of experts

In the present study, the content value of the questionnaire is 0.7, which is adequate.

A pilot study was done in the month of March 2016 on a sample of 150 subjects, to check the feasibility of the study using a semi-structured, pretested, validated, interviewer-administered questionnaire. Through pilot test, the internal consistency of the questionnaire was tested and yielded a result of Cronbach's α value (0.81), which is satisfactory.

Statistical analysis

Statistical package for social sciences (IBM SPSS, Chicago) version 20.0 is used for the analysis, and *P* value ≤ 0.05 is considered as statistically significant. Statistical tests such as descriptives, Chi-square test, Spearman correlation, and binomial logistic regression were used for the analysis.

Results

The study sample comprised of 1,500 subjects who were equally divided among five age groups. Out of 1,500 subjects, 52.8% were females and 47.2% were males [Table 1]; majority of them are unmarried (60.2%) with 60% of the study participants belonging to rural followed by urban (26.7%) and peri-urban (13.3%). In total, 51.3% has 4–5 members in a family and majority of the study population belonged to middle class (40.1%) with primary occupation as clerical, shop owner, and farmer, where 32.1% of them have primary school certificate, while predominant population follow a mixed diet (89%) and majority of them belonged to open category caste (53.1%), while 63.2% of them have below poverty line cards issued by the government of Andhra Pradesh [Table 2].

In total, 71.7% of the study participants have utilized health services [Table 3] with majority of them (44.5%) had availed services within last 6 months with prime reason of fevers (15.8%), followed by gastrointestinal problems (11.5%), metabolic problems (11%), and cardiovascular problems (10.4%) [Table 4]. When asked about nearest available facility its distance and care sought from various places, 76.6% of them said that the nearest place being private hospital with distance less than

Table 1: Distribution of study population according to Demographic profile

Demographic Profile	Frequency	Percent	
Age	5 years	300	20.0
	12 years	300	20.0
	15 years	300	20.0
	35-44 years	300	20.0
	65-74 years	300	20.0
	Total	1500	100.0
Gender	Male	708	47.2
	Female	792	52.8
	Total	1500	100.0
Marital status	Married	600	40
	Unmarried	900	60
	Total	1500	100.0
Place	Urban	400	26.7
	Peri-urban	200	13.3
	Rural	900	60.0
	Total	1500	100.0
No. of family members	1-3 members	663	44.2
	4-5 members	770	51.3
	6-7 and above	67	4.5
	Total	1500	100.0
Socio-economic class	Upper class	308	20.5
	Upper-middle-class	451	30.1
	Middle class	602	40.1
	Lower-middle-class	95	6.3
	Lower class	44	2.9
	Total	1500	100.0

5 km from their residence (67.2%), while majority of them sought care from private clinics (52.84%), followed by primary health centers (11.53%). Among care sought from others, majority of them sought care from (6.05%) registered medical practitioner (RMP) followed by homeopathy (2.33%), and voluntary organizations (1.86%) [Table 5].

The main reason for selection of particular health care provider/center was nearness (36.84%) followed by Doctors reputation (35.35%), whereas 50% of them reported that they were very much relieved from suffering after they sought care. However, 30.33% of the study population has spent 501–2000 INR for their last medical visit, while their primary mode of payment was out of pocket (73.02%) [Table 6].

Majority of them reported that cold and cough (17.77%) followed by knee pain (17.03%) and fevers (14.07%) are the problems that suffered without taking care, while the main barrier for not seeking care was distance (17.03%), equal proportion of the population (16.29%) sought care for their problems through home remedies and over-the-counter (OTC) [Table 7].

With 89.3%, 65–74 years age group subjects were found to be dominant in the utilization of health services followed by 82.7% of the 5 years age group, and the difference between the age group and health services utilization was found to be statistically significant ($p \leq 0.001$, $r = 0.76$).

Table 2: Distribution of subjects according to occupation, education, diet, caste, and ration card

		Frequency	Percent
Occupation	Profession	236	15.7
	Semi-profession	132	8.8
	Clerical, shop owner, farmer	500	33.3
	Skilled	232	15.5
	Semi-skilled	153	10.2
	unskilled	211	14.1
	unemployed	36	2.4
	Total	1500	100.0
Education	Profession/honors	125	8.3
	Graduate/Postgraduate	83	5.5
	Intermediate/Post high school diploma	124	8.3
	High school certificate	236	15.7
	Middle school certificate	357	23.8
	Primary school certificate	482	32.1
	Illiterate	93	6.2
	Total	1500	100.0
Caste	ST	34	2.3
	SC	201	13.4
	BC	468	31.2
	OC	797	53.1
Ration card	White card	948	63.2
	Pink card	354	23.6
	No card	198	13.2

Table 3: Distribution of subjects according to health services utilization

Utilization	Frequency	Percent
No	425	28.3
Yes	1075	71.7
Total	1500	100.0

Utilization of services in a lower class (97.70%) and lower-middle-class (94.70%) was found to be predominant, and the difference between the socio-economic class and health services utilization was found to be statistically significant ($p \leq 0.001$, $r = 0.114$).

In total, 74% of the urban area population was found predominant in utilization of health services, and the difference between the place of residence and health services utilization was found to be not statistically significant ($p \leq 0.422$, $r = -0.32$).

In total, 72.5% of the males were found higher in utilization of health services, and the difference between gender and the health services utilization was found to be not statistically significant ($p \leq 0.279$, $r = -0.017$).

Health services utilization among 5 years age group was 0.755 times less when compared to 65–74 years age group, which is not statistically significant ($p \leq 0.260$). Gender wise utilization revealed that males utilized 0.941 times less compared to females, which is not statistically significant ($p \leq 0.623$); while for the place of residence, urban place was 1.332 times more utilizing

Table 4: Distribution of subjects according to time of last medical visit and reasons for visit

		Frequency	Percent
Last medical visit	Never visited	425	28.3
	1-6 months	668	44.5
	7-12 months	190	12.7
	1-2 years	113	7.5
	2-3 years	39	2.6
	More than 3 years	65	4.3
Reasons for medical visit	No history	425	28.3
	CVS problems	156	10.4
	GIT problems	172	11.5
	Respiratory problems	50	3.3
	General check-up	59	3.9
	Musculoskeletal problems	91	6.1
	Ophthalmic problems	11	0.7
	Accident/trauma	26	1.7
	Allergy	22	1.5
	Fevers	237	15.8
	Neurological problems	6	0.4
	Immunological problems	1	0.1
Metabolic disorders	165	11.0	
Others	65	4.3	
Renal problems	14	0.9	

Table 5: Distribution of subjects according to nearest available medical facility, its distance as perceived by the subjects, and care sought from various centers or places

		Frequency	Percent
Nearest available medical facility	Don't know	2	0.1
	Private hospital	1149	76.6
	PHC	184	12.3
	RMP	87	5.8
	Anganwadi	39	2.6
	Government hospital	39	2.6
Distance for medical facility from your place	Don't know	16	1.1
	Less than 5 km	1008	67.2
	More than 5 km	476	31.7
Care sought from Government centers	Sub center	6	0.56
	PHC	124	11.53
	Area hospital	8	0.74
	District hospital	38	3.53
Care sought from private centers	Private clinic	568	52.84
	Nursing home	96	8.93
	Multispecialty hospital	100	9.30
	Medical college	19	1.77
	Corporate hospital	2	0.19
Care sought from other agencies	Voluntary organizations	20	1.86
Others	RMP	65	6.05
	Over-the-counter (OTC)	2	0.19
	Homeopathy	25	2.33
	Home remedies	2	0.19

the services when compared to rural place, which is statistically significant ($p \leq 0.059$). On the basis of socio-economic status, the lower-middle-class utilized 0.412 times less when compared to lower class, which is not statistically significant ($p \leq 0.427$);

Table 6: Distribution of subjects according to various reasons for selection of particular center, their experience, amount spent, and mode of payment during their last general health care visit

		Frequency	Percent
Reasons for selection of particular health care provider/center	Free	17	1.58
	Doctors reputation	380	35.35
	Near	396	36.84
	Known doctor	85	7.91
	Better treatment/care	120	11.16
	Low cost	37	3.44
	Thought home remedies are sufficient	11	1.02
	Less time	29	2.70
Are you relieved from suffering after you sought care?	Very much	750	69.77
	Somewhat	311	28.93
	Undecided	2	0.19
	Not really	3	0.28
Amount spent for last medical visit	Not at all	9	0.84
	Free	196	18.23
	1-500	248	23.07
	501-2,000	326	30.33
	2,001-10,000	207	19.26
Mode of payment	10,001-100,000	98	9.12
	Insurance	23	2.14
	Reimbursement	71	6.60
	Out of pocket	785	73.02
	Government hospital/schemes	196	18.23

while for utilization among pink card ration, cardholders were 2.130 times more when compared to no cardholders, which is statistically significant ($p \leq 0.001$) [Table 8].

Discussion

Health is a universal human need across all cultures and groups. It has been established beyond doubt that optimal health cannot be attained or maintained independent of oral health.^[14] Health service utilization is a multifactorial phenomenon and depends on various factors such as health conditions, socio-economic conditions, attitude, and financial conditions.^[15]

Utilization of health services

Utilization of health care services in the present study was 71.7%, which was high when compared to other studies done by Saritha Vargese *et al.* (2013).^[16] The utilization of public health services was 36% in rural population, whereas it was only 25% in urban slums. However, 48% households utilized services from public sources in a study done by Sur D *et al.* (2004),^[17] and it was 26% in a study done by Gupte R.K *et al.* (1996)^[18] among the slum dwellers.

Reasons and last time of medical visit

In total, 44.5% of the study population has sought care in the past 6 months. Fevers such as malaria, typhoid, dengue, and

Table 7: Distribution of subjects according to various problems suffered and reasons for refraining from seeking health care

		Frequency	Percent
Various medical problems of the participants who have not utilized the services	Bruises	8	5.92
	Allergies	7	5.18
	Cold and cough	24	17.77
	Headache	12	8.88
	Knee pain	23	17.03
	Chest pain	18	13.33
	Gastritis	12	8.88
	Hypertension	12	8.88
	Fever	19	14.07
	Reasons for refraining from seeking medical care	Lack of time (Morning or evening)	10
No accompanying person		11	8.14
Negligence		20	14.81
Does not affect my work		15	11.11
I like to try self care and home remedies		23	17.03
Distance		23	17.03
Expensive (OTC)		11	8.14
Over-the-counter (OTC)	22	16.29	

chikungunya which are of viral origin being the predominant reason for the medical visit, which occupied 15.8% in the present study, followed by gastrointestinal disorders (11.5%) and metabolic disorders such as diabetes (11%) and cardiovascular problems (10.4%). Fevers as the main health problem followed by the gastrointestinal problem was reported in a study done by Alastair Ager and Katy Pepper (2005).^[19]

Acute febrile illness can occur whenever some type of infectious agent invades the body, but it is especially worrisome in tropical and sub-tropical regions like India, where serious diseases loom. Therefore, the condition being acute has made them to utilize the services more when compared to others.

It was found that 85% of the deaths are related to cardiovascular problems alone in the state of Andhra Pradesh. Among them, 97% being under the below poverty line and only 3% above the poverty line, whereas 57% being males and 43% females. Most persons suffering from cardiovascular problems lie down between 48 and 58 years age group.^[20]

In rural areas, on average, a person spends around 6, 260 rupees for medication; whereas in urban areas, it was around 10,000 rupees, which accounts for 34% of their monthly income in urban areas and 27% among rural areas. It was estimated that by 2040, 13 crores people are going to suffer from diabetes. The reasons could be owing to genetics, lifestyle changes, lack of exercise, more carbohydrate diet, and finally, changes in the environment.^[21]

Table 8: Binomial logistic regression between general health services utilization and independent variables

Variables	OR	95% CI		p
		Lower	Upper	
Age groups				
5 years	0.755	0.462	1.232	0.260
12 years	0.247	0.157	0.389	0.000
15 years	0.178	0.114	0.278	0.000
35-44 years	0.357	0.223	0.572	0.000
Gender				
Males	0.941	0.739	1.199	0.623
Place				
Urban	1.332	0.989	1.793	0.059
Peri-urban	1.194	0.827	1.723	0.344
SES				
Upper class	0.105	0.014	0.791	0.029
Upper-middle-class	0.093	0.012	0.695	0.021
Middle class	0.098	0.013	0.724	0.023
Lower-middle-class	0.412	0.046	3.682	0.427
Ration card				
White card	2.117	1.448	3.095	0.000
Pink card	2.130	1.410	3.218	0.000

List of reference categories for each independent variable: Age groups- 65-74 years; Gender- Females; Place- Rural; SES- Lower class; Ration card- No card

In the present study, there was 0.1% of the population suffering from the immunologic diseases such as HIV, and it was around 4% as per Guntur district statistics comprising of 3.31 lakh HIV patients, with an incidence of 3,672 cases between 2015 March and 2016 April in Guntur district.^[22]

Center/place for care sought

In total, 52.84% of the population sought care from the private clinics followed by primary health centers (11.53%), whereas 54% of the subjects preferred primary health centers for the treatment of leptospirosis in rural areas in a study done by Mathew G (2007).^[23] Astonishingly, 6.05% of the present study population sought care from RMP/informal providers; while in a study done by James Kisia *et al.* (2012),^[24] most participants (63.4%) reported that they utilized community health workers for malaria treatment.

People consult informal providers such as RMPs for a variety of common conditions, which include fevers, diarrhea, and respiratory problems according to studies done by Rohde and Vishwanathan 1995;^[25] Kanjilal *et al.* 2007;^[26] Gautham *et al.* 2011;^[27] George and Iyer 2013;^[28] and Meenakshi Gautam *et al.* 2014.^[29]

The private health sector has grown drastically during the post-independence period, and the contribution of the private sector was less than 8% at the time of independence (1947). By 2012, approximately 80% of healthcare services in India were provided by the private sector and it accounts for 85% of the health care professionals. The public sector currently provides about 20% of outpatient care services and over 40% of inpatient care. The planning commission has reported that in the private health sector incentives are tilted toward curative services and medical education.^[30]

Distance of the nearby health service provider

In the present study, 67.2% of them reported that the distance from the nearest service provider as less than 5 km, whereas rest 31.7% reported being more than 5 km. While in a study done by Pawan Kumar Sharma *et al.* (2008),^[31] 40% of them has reported that the nearest health service provider with proximity from their place was less than 5 km and the rest 60% reported more than 5 km.

Reasons for selection of particular health care provider/center

Totally, 36.84% of the study population has said that accessibility/near was the main reason for selection of the particular center/provider followed by 35.35% of them reported reputation of the doctor as another reason for the choice of the center. In a study done by Saritha Vargese *et al.* (2013),^[16] 64.1% reported lower user fees followed by 18.4% near to house were the main reasons for the selection of a particular center. Reputation in terms of perceived quality—has been found to be one of the main determinants of utilization of a particular health care provider, and “recovery” is one of the most important criteria that patients use to judge the quality of services and choice of health service provision (Haddad *et al.* 1998,^[32] Alastair Ager and Katy Pepper. 2005).^[19] In a study done by Pawan Kumar Sharma *et al.* (2008),^[31] the main reasons for selection of a particular hospital are inexpensive (87.9%) and skilled doctors (65.9%).

Mode of payment during their last medical visit

In addition, 73.02% of the population has used out of pocket as their main mode of payment for the services utilized. According to an annual report to the people on health by the ministry of health and family welfare, Government of India (December 2011) approximately 71% of the total health care expenditure in the country was borne by households out of their pockets, whereas the payment through the third party was common among western counterparts. Out of pocket expenditure was any direct outlay by households, including gratuities and in-kind payment to health practitioners and suppliers of pharmaceuticals, therapeutic appliance, and other goods and services whose primary intent was to contribute to the restoration or enhancements of the health status of individuals or population groups, as per the definition given by the World bank.^[33,34]

Amount spent for last medical visit

However, 30.33% of the study population has spent around 501–2000 Indian rupees on their last medical visit, whereas it was 1–500 Indian rupees for delivery of services in a study done by Pushpendra Kumar and Abha Gupta (2016)^[35]; while only 26.5% of them spent 501–2000 INR for the institutional delivery.

Experience with treatment received as perceived/told by subjects

Approximately, 69.77% of the study population has reported that they were very much relieved/satisfied after they sought

care from the center, while in a study done by Saritha Vargese *et al.* (2013)^[16] 18.4% reported that the treatment given by the public services were not effective.

Various medical problems of the participants who have not utilized the services

Common cold and cough are not considered as important to visit health care facility owing to the availability of OTC medications and home remedies, which was reported by 17.77%, while knee pains reported by 17.03% of the study population was considered as a common serious problem among aged persons.

Reasons for refraining from seeking medical care

Almost equal proportions of the study participants (17.03%) has reported that they like to try self-care and home remedies, proximity from the place, and OTC were the main reason for refraining from seeking medical care, whereas in a study done by Saritha Vargese *et al.* (2013),^[12] the reasons for not using public health services as 74% said that public services are free, but they take money and 18.5% have reported that the treatment was not effective.

While in other studies, the reasons for refraining from utilization of health are cost, perceived lack of quality, accessibility, transport, and financial constraints that also include lack of insurance.^[36-40]

Generalizability

The sampling process ensured the representativeness of the population and contributes to the internal validity of the study. However, the process of training and standardization that the research went through, and also by the high concordance obtained through kappa test ensured the reproducibility of the data. Non-availability of validated questionnaire necessitated the use self-developed questionnaire. The questionnaire utilized possessed good reliability and also adds to the internal validity of the study. Cross-sectional studies that inquire questions about the past require participant's ability to recall past events. In this study, recall bias was minimal, as it is believed that pain suffered owing to health problem was not likely to be soon forgotten.

Limitations

The results found in this study cannot be inferred to other population owing to differences in socioeconomic status, culture, and access to and use of health services found in India. The cross-sectional design of the study inherits a limitation; it does not allow the determination of the causal relationship between the variables investigated and the outcome. Although a short-time frame was used, recall bias was inevitable.

Conclusion

There is an utmost need to minimize barriers of utilizing the services by motivating people and making them aware about the

health problems so that they develop a positive attitude toward health care utilization. Changing the perception toward health, undertaking an effective program to build science transfer, increasing workforce by strengthening the safety net system, and successfully partnering in all levels of society can bring healthy life. Pliability and acclimatization to change will be essential in the medical education in the future while analyzing the profile and patterns of the disease will help to reduce the economic impact of health and also helps in providing well-balanced care, while it also aids to reduce the variations in performance among physicians to deliver quality health care.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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