

## Original Research Article

DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20203369>

# Health service utilization by a semi-urban community in Kedah, Malaysia, 2019

Mona Kanna Kodeesh Kanna<sup>1</sup>, Khoo Wei Chin<sup>1</sup>, Khoo Chun Yik<sup>1</sup>, Saraswathi Bina Rai<sup>2\*</sup>

<sup>1</sup>Medical Student, <sup>2</sup>Faculty of Medicine, AIMST University, Bedong, Kedah, Malaysia

**Received:** 24 May 2020

**Revised:** 30 June 2020

**Accepted:** 01 July 2020

**\*Correspondence:**

Dr. Saraswathi Bina Rai,  
E-mail: binarai@yahoo.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Socioeconomic development in Malaysia and the call for Universal health coverage has resulted in comprehensive health care being easily available and accessible at an exceptionally low cost to the people. The aim was to study the health utilization pattern of a semi-urban community to determine their health seeking preference, to understand the extent to which the medical facilities are being used by them and their level of satisfaction with the services received.

**Methods:** We used a pre-tested structured questionnaire, with face-to-face interview of representatives of randomly selected households in 2 housing estates in Kedah. The questionnaire covered education level, income, and information relevant to health service utilization. Data, after verification was transcribed into excel and analysed using Epiinfo7.2.

**Results:** Out of 112 households visited, 80.3% was in the B40 group. Of all, 96 (85.7%) individuals chose Government healthcare with no significant difference between the B40 and others ( $p=0.3$ ). Currently 52.6% have children utilizing child health services and 47.1% utilizing the maternal health services. Most (70.5%), irrespective of education level do not go for general checkup. Those that do, have an underlying medical condition. Payments for hospitalization and medications were done by 38.4% and 30.3% respectively. Most frequent investigation was X-ray, ECG, and ultrasonography. Dental checkup accounted for 50.7% of type of service utilized. Overall, 63.4% of respondents were satisfied with the level of healthcare in the country.

**Conclusions:** This community opts for Government health care and is generally satisfied with the level of care provided.

**Keywords:** Health utilization, Health service, Private

## INTRODUCTION

Socioeconomic development in Malaysia and the call for universal health coverage has resulted in comprehensive health care being made available and accessible to all citizens in the country at an extremely low cost. Universal health care is defined by the World Health Organisation as ensuring that all people have access to needed health services of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardship.<sup>1</sup> Primary health care

in Malaysia plays a vital role in bringing health services close to people's homes and communities. It may be provided by both the public and the private sector: public through the various Government health centres and clinics or it may be private through a lattice of general practitioners spread throughout the country, with most concentrated in the urban regions. In Malaysia, the cost of universal health coverage provided by Public Health care is borne through general revenue. In tandem with this, private health care has grown especially in urban areas of the country. This public health care has been the

backbone of the health care in the country and it is provided free or with a minimal charge of RM1 per consultation. However, there is an urban rural divide in the way the people seek health care. The rural area is a focus in the 11<sup>th</sup> Malaysian plan that targets underserved areas by increasing local capacity at these areas with improved healthcare facilities and personnel.<sup>2</sup> In addition to this it aims to promote community engagement to ensure that health is a shared responsibility.

The aim was to study the health utilization pattern of semi-urban community in Kedah to determine their health seeking preference and to understand the extent to which the medical facilities are being used by them.

## METHODS

This was a descriptive, cross-sectional study conducted in a semi-urban community in the state of Kedah. The study was conducted from April to May, 2019. This activity is a requirement under the Year 3 curriculum of the university. Ethical clearance is universal as annually 7 groups carry out surveys at different locations in the state. The community is randomly chosen by a liaison officer who approaches the head of the community to get permission to carry out the survey. The location chosen was 2 semi-urban communities located side by side. The residents of one area were mostly retired armed forces personnel whilst the other was mostly civilians. Many of the homes were unoccupied and were not considered in calculation of sample size. Our target area consisted of about 200 occupied homes.

### Sample size calculation

The sample size (n) was calculated according to the formula:  $n=[z^2*p*(1-p)/e^2]/[1+(z^2*p*(1-p)/(e^2*N))]$

Where: z = 1.96 for a confidence level ( $\alpha$ ) of 95%, p=proportion (expressed as a decimal), N=population size, e=margin of error. z=1.96, p=0.2, N=200, e=0.05

Using this formula n≈111

The sample size (with finite population correction) is approximately equal to 111.

### Inclusion criteria

Only residents of these two housing communities are selected for the survey. We interviewed the residents only if they were willing to participant in the survey and were Malaysian citizens. Respondents had to be over 18 years.

### Exclusion criteria

Non-Malaysians and those who were unwilling to participate were excluded in this survey.

### Questionnaire

The group of students first visits the community that has been pre-selected to get an idea of the problems faced by them. We used a pre-tested structured questionnaire, with face-to-face interview of representatives of randomly selected households in the two pre-selected housing estates in Kedah. Permission is sought before the interview is conducted. The villagers are assured of anonymity and there is no identifying information on the survey forms. If the representative of the household does not wish to partake in the survey, the next house is chosen. The questionnaire covered education level, income, and information relevant to health service utilization. We covered medication, investigations and procedures done. Likert's 5-point scale was used in the assessment of overall level of satisfaction. Data, after verification was transcribed into excel and analyzed using Epiinfo 7.2.

## RESULTS

We had 112 respondents with 74 (66.1%) males and 38 (33.9) females. They were of mixed ethnicity with 88 (78.6%) of them being Malays. The rest were mostly Indians (16.9%). There were a few Chinese as well (4.5%). The educational level was mostly up to Pre-University level (96.4%). Most were employed (50.9%), but a large number were either unemployed (22.3%) or retired (21.4%). The retirees were mostly from one of the 2 housing estates where most of the armed forces veterans were.

The ages of the respondents ranged from 18 years to 83 years with 43.7% being armed forces veterans and with 88% being of age above 40 years. The mean age was  $47.8 \pm 11.2$  years. Most (80.3%) earned an income of less than RM3000 per month. Amongst the respondents, 49 (43.7%) were from the armed forces and the rest, 63 (56.3%) were civilians.

All the respondents prefer to seek treatment from the Government sector, but civilians were more likely to use the private sector as compared to the armed forces veterans ( $\chi^2$  square=6,  $p=0.001$ ).

From our results we found that 74 (67.3%) of them utilized the child health care services that was provided to the community through the Government clinics and 66 (58.9%) of the female respondent (or spouse) had utilized the antenatal care provided.

The most common medical investigation carried out was X-rays (78, 69.6%) and electrocardiogram (ECG) where 48 (42.8%) had undergone one. This was followed by ultrasound (30.3%). We had asked about having undergone stent or a coronary bypass as well as on hip or knee replacement but none of the respondents had undergone these procedures.

**Table 1: Demographic profile of respondents.**

Demographic profile	Number	%
Gender	Male	74 66.1
	Female	38 33.9
Race	Malay	88 78.6
	Chinese	5 4.5
Highest level of education	Indian	19 16.9
	Primary School	54 48.2
Occupational status	PMR (Form 3)	25 22.3
	SPM (Form 5)	12 10.7
	STPM(Pre-University)	17 15.2
	Others	4 3.6
Marital status	Employed	57 50.9
	Unemployed	25 22.3
	Retired	24 21.4
	Others	6 5.4
Monthly household income (RM)	Single	7 6.3
	Married	97 86.6
	Divorced	1 0.9
	Widowed	7 6.2
Age (completed years)	< 1000	17 15.2
	1000 – 2000	50 44.6
	2001 – 3000	23 20.5
	3001 – 4000	11 9.8
	>4000	11 9.8
Service type	Up to 20	2 1.8
	21-30	8 7.1
	31-40	14 12.5
	41-50	44 39.3
	51-60	36 32.1
	61-70	5 4.5
	>70	3 2.7
Service type	Armed Forces	49 43.7
	Civilian	63 56.3

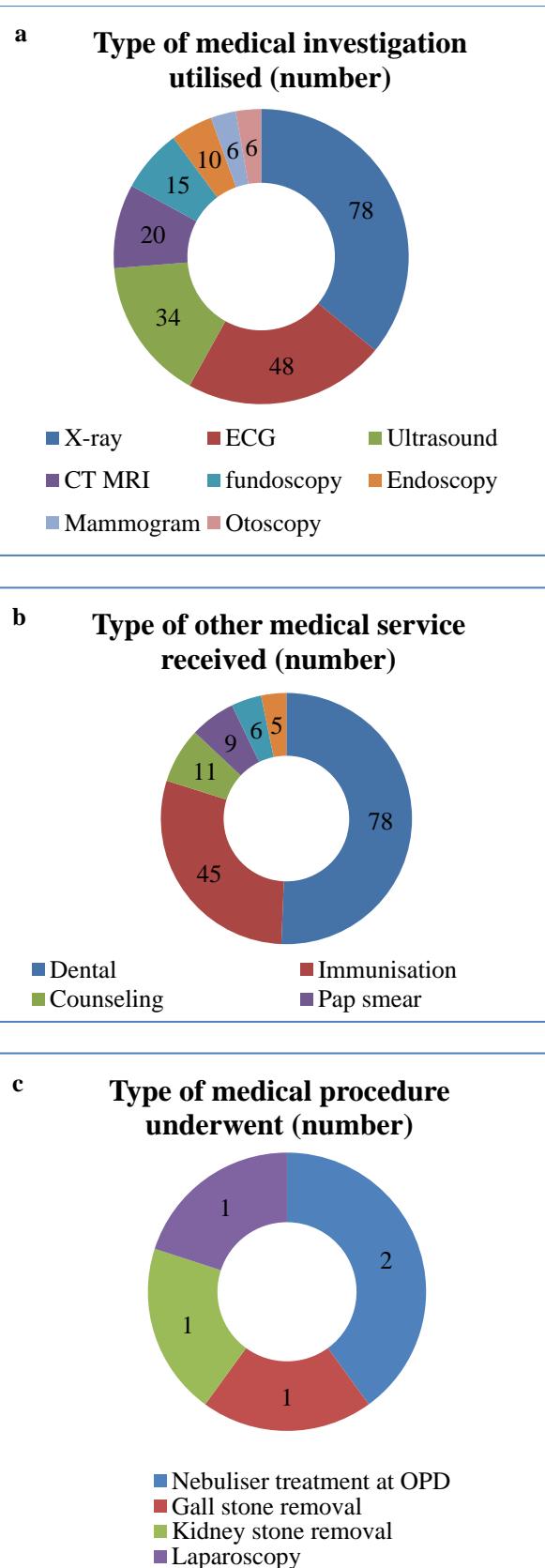
Two had gone for nebulizer treatment at outpatient department (OPD), one had a gall stone removal and another had a kidney stone removal done.

**Table 2: Choice of sector for seeking treatment (veterans and civilians).**

Choice of sector	Govt. (number)	Private (number)
Veteran	47	2
Civilians	49	14

#### Type of investigations, services, and procedures

We also investigated the type of medical investigation, medical procedures and other medical service utilization by the respondents. Many of the respondents had undergone dental treatment (69.6%) with overall 45 (40.2%) of them having had immunization.



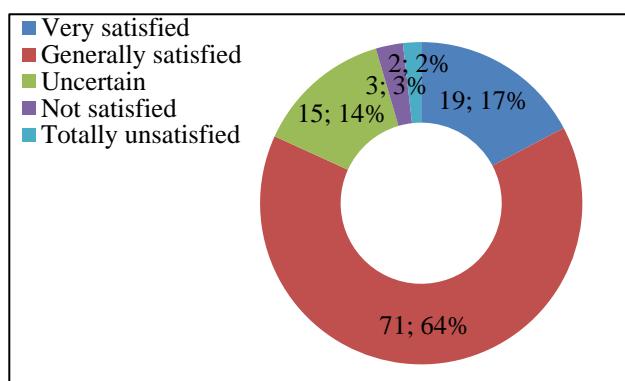
**Figure 1 (a-c): Utilization of health services - type of medical investigation, type of other medical services received, and type of medical procedure underwent (not inclusive).**

Out of the 38 female respondents, only 9 could remember having had a pap smear. We asked about dialysis but none of the respondents were on dialysis or had a family member on dialysis. On periodic check-up for chronic diseases, only 33 (29.7%) went for it.

#### Payments

We looked at overall payment for health services. We found that out of total, 43 (38.4%) were charged for hospitalizations, 34 (30.4%) were charged for medications and 45 (40.2%) were charged for the medical services they received.

Less than half of the community paid for any of the services they received-either for general services, hospitalization or for medication. There was no difference between those who went to private or public services.



**Figure 2: Level of satisfaction with the health services provided to the community.**

Most of those in this community were satisfied with the services provided (Figure 2). They were either very satisfied (17%) or generally satisfied (64%). There was 14% who were uncertain but the proportion that felt unsatisfied to any degree was 4.5%.

#### DISCUSSION

This survey was carried out within 2 housing estates in a semi-urban area that are near one another. One of the estates was almost solely occupied by armed forces veterans. There were about 100 houses most of which was unoccupied. The housing estate next to it was a mixed community. In a world where more than half of the population does not have access to essential health care, Malaysia is fortunate to have a comprehensive health coverage that is accessible and affordable to all. From this study, most of the respondents earned less than RM3000 monthly putting them in the B40 income group, i.e. the bottom 40% of low-income earners in the country.<sup>4</sup> As seen in this study, most did not have to pay for any of the medical services received. However, none of them had undergone any major surgery or procedures. No one was on dialysis. From the responses received only 5 had undergone any kind of procedure, of which the

most common was for nebulizer at the outpatient, implying this community did not need seek medical care often.

According to the Malaysian national health expenditure report, in 2013, 36% of total expenditure for health was financed through “out of pocket”, 54% by general revenue and 8% through private health insurance.<sup>5</sup> That which is funded by general revenue is the comprehensive health care provided to the citizens of the country via the numerous Government hospitals and health centers in the country. From a national survey, 74% of the rural population uses public services for outpatient care.<sup>6</sup> This varies with urban where choice of utilization is almost equal with 55% of the people using public outpatient services. Unlike other studies, the public sector health care services are well utilized here.<sup>7</sup> A world health report has indicated that globally, in 2010, about 8 million people experienced catastrophic health spending, which basically means that they spend a sizeable part of their income on health care.<sup>8</sup> With affordable health care, the availability of public health care in this community, they do not suffer catastrophic health spending. With a minimum fee of RM1, a Malaysian can have access to all the medications and services that he needs in the public sector.

The current push now is towards enabling an environment that promotes self-care. This is a strategy by the World Health Organization to empower citizens especially in areas where universal health coverage is not easily available.<sup>9</sup> This broad concept encompasses hygiene, nutrition, lifestyle, as well as environmental and social factors. The aim is for individuals to be able to make informed and rational decisions towards their own health. In the process it is hoped that they would also take charge of their own health. The nearest health center to this community is about 5 km away which makes it easily accessible, but the aim is still to make the community independent and empower them to take care of their own health.

Community empowerment and health education are important strategies in the control of non-communicable diseases.<sup>10</sup> We found that they go for general immunization, antenatal services and child services that are all well utilized. Many also avail of the dental services being offered in the public health facilities. However, where basic care is concerned, many of the women did not go for Pap smear services, even though this is easily available and encouraged. Only 29.7% went for periodic checkup for non-communicable diseases, in spite of chronic diseases being on the rise in Malaysia and the Government efforts to educate the people to go for screening. The thrust is for people-centered care.

The most common examination undergone by the community here is for X-ray for various reasons. This is followed by ECG (electrocardiogram) and ultrasound, all of which are available either at the nearby health center or at the closest hospital. Generally, it is seen that as the

population ages, there is an increase in the morbidity pattern.<sup>11</sup> In addition, being in a semi-urban setting, most of the medical staff are familiar with the patients they treat and this adds to patient satisfaction.<sup>12</sup>

### **Limitations**

Our study was limited to the type of services available and utilized. It was not focused specifically to any disease.

### **CONCLUSION**

In this study, this community mostly utilizes Government funded care as it is affordable and of good quality. This public health services are well utilized. Overall they are generally healthy without having undergone any major surgery or procedure and most are also satisfied with the level of care that they have received.

### **ACKNOWLEDGEMENTS**

Author acknowledge the efforts of the whole class of Year 3, Batch 22, Group H of AIMST University, who were involved in the survey. Also they appreciate the villagers from the 2 housing estates who consented and took part in this survey.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

### **REFERENCES**

1. World Health Organisation (WHO). Available at: [https://www.who.int/healthsystems/universal\\_health\\_coverage/en/](https://www.who.int/healthsystems/universal_health_coverage/en/). Accessed on 12 December 2019.
2. 11th Malaysia Plan: Anchoring Growth on People. Economic Planning Unit, Prime Ministers Department, Malaysia.
3. Sample size calculator. Available at: <https://www.goodcalculators.com/sample-size-calculator/> © 2015-2019 goodcalculators.com. Accessed on 12 December 2019.
4. Report of Household Income and Basic Amenities Survey 2016. Department of Statistics Malaysia.
5. Available at: <https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=RUZ5REwveU1ra1hGL21JWV1PRmU2Zz09>. Accessed on 21 January 2020.
6. Malaysia National Health Accounts. Available at: [http://www.moh.gov.my/moh/resources/Penerbitan/Penerbitan%20Utama/MNHA/Pembentangan\\_Mesyuarat\\_Jawatankuasa\\_Pemandu\\_MNHA\\_2018\\_National\\_Health\\_Expenditure\\_1997-2017\\_07122018.pdf](http://www.moh.gov.my/moh/resources/Penerbitan/Penerbitan%20Utama/MNHA/Pembentangan_Mesyuarat_Jawatankuasa_Pemandu_MNHA_2018_National_Health_Expenditure_1997-2017_07122018.pdf). Accessed on 12 December 2019.
7. National Health and Morbidity Survey 2015. Available at: <https://www.moh.gov.my/moh/resources/NHMS2015-VolumeIII.pdf>. Accessed on 21 January 2020.
8. Shaikh BT, Hatcher J. Health seeking behaviour and health service utilization in Pakistan: challenging the policy makers. *J Public Health.* 2005;27(1):49-54.
9. Wagstaff A, Flores G, Hsu J, Smitz MF, Chepynoga K, Buisman LR, Wilgenburg KV, Eozenou P. Progress on catastrophic health spending in 133 countries: a retrospective observational study. *Lancet Glob Health.* 2018;6(2):169-79.
10. WHO consolidated guideline on self-care interventions for health: sexual and reproductive health and rights. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO.
11. Diana R, Safrin M, Nada, Rosliza AM. Management of Non-Communicable disease prevention at district level in Malaysia. *Int J Public Health Clin Sci.* 2019;6(4):53-67.
12. Ani N, Rajini S, Balkish MN, Noraida K, Maria AS, Fadhl MY, et al. Morbidity patterns and healthcare utilization among older people in Malaysia. *Public Health.* 2018;163:105-12.
13. Thornton RD, Nurse N, Snavely L. Influences on patient satisfaction in healthcare centres: a semi-quantitative study over 5 years. *BMC Health Serv Res.* 2017;17:361.

**Cite this article as:** Mona KK, Khoo WC, Khoo CY, Bina Rai S. Health service utilization by a semi-urban community in Kedah, Malaysia, 2019. *Int J Community Med Public Health* 2020;7:2956-60.