ORIGINAL ARTICLE

Kapitasi Payment Analysis Based on Functioning of Dental Health Service on First-Hand Health Facility on National Insurance System in Padang City

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ABSTRCT

Background: Service of Kapitasi payment on dental health for first-hand health facility in national insurance era have been always dentist question in Indonesia. The main question is related to the accuracy of payment.
Aim: To analysis some of kapitasi value and its accuracy and influence.
Study design: Quantitative and qualitative research with cross-sectional approach. Sample was taken from patient in First-hand health facility (FKTP). Dependent variable was utilization of service whereas independent variable was namely: salary, nursing requirement, smoking habit, facility, human capital, service access and service structure.
Result: Income and access affected the utilization of dental health service. Moreover, the national insurance in FKTP increased the number of visiting and equal driven easy access.
Conclusion: Kapitasi payment of dental health service should be higher in FKTP which is regulated universally by Government.
Keywords: Dental health service payment, service utilization, Puskesmas, clinics Pratama

INTRODUCTION

Suitable of health service payment will be able to control health cost and achieving health service effectively. Medical apparat has ability to decide given type, quantity and quality service. Furthermore, the appropriate payment method is capable of improving quantity and quality which in-turn will increase health service.

Kapitasi payment which been commonly employed by government in FKTP is strategy to reduce the cost thereby positioning health service provider (PPK) as partial or total insurer of dental health cost. The Indonesian citizen awareness to visit dentist is still reminded ridiculously low related to the severity and complexity of disease. This circumstance will increase the payment.

Basic dental health service integrated in JKN including curative, persuasive, preventive and rehabilitative service is not restricted by age, social stratification, and special case. Minister of health has assigned kapitasi payment in dental health as much as Rp 2000,- and its utilization 2.03%. The regulation of kapitasi tariff from provider in national system is urgently matter particularly its suitability and effectiveness. We investigate the kapitasi payment in dental health service on Puskesmas as FKTP.

METHOD

This study was qualitative and quantitative with cross-sectional sampling design. Independent variable was family income, dental health awareness, smoking habit, facility, service accessibility and structure. Beside, the dependent variable was including dental health utilization in *Puskesmas* and Clinics Pratama in Padang city. Sample population was JKN patient meanwhile the sample was National health insurance (JKN) patient visiting Puskesmas and Clinics Pratama in Padang city.

Bi-variate analysis was conducted by using chi-square where the Significance interpretation was stated by Prevalence ratio (PR) (95% confidence interval) and p< 0.05. Multivariable analysis was carried in order to find out the interaction between above-mentioned independent variables with dependent variable.

RESULT

Cluster Multivariate analysis in Puskesmas: The result of multivariate logistic regression is an estimation of probability from independent variable (Table 1). Income variable as independent variable has significant association with dependent variable particularly utilization.
Cluster Multivariate analysis in Clinics Pratama: Multivariate analysis result based on univariate logistics regression is listed in Table 2. This cost unit calculation was carried by perfoming activity based coasting method on two *Puskesmas* and 2 Clinics Pratama. The analysis result is presented in Table 3.
Qualitative analysis: Qualitative analysis which was calculated in order to find domain in which every answers was analyzed and based on the conceptual perspective. The answer is listed in Table 4.

Table 1: Cluster Multivariate analysis in Puskesmas

Variable	P-Value	PR	95% CI
Income	**0,011**	**4,355**	**1,398-13,570**
awareness	0,264	0,584	0,227-1,500
Smoking habit	0,205	2,107	0,666-6,671
Facility	0,161	2,402	0,706-8,175
Access	0,946	0,945	0,186-4,792
Structure	0,865	0,238	0,227-5,850

Table 2: Cluster Multivariate analysis in clinics pratama

Variable	P-Value	PR	95% CI
Income	0,207	2,357	0,622-8,936
awareness	0,385	0,625	0,217-1,805
Smoking habit	0,418	1,755	0,449-6,859
Facility	0,309	0,450	0,097-2,097
Access	**0,019**	**5,259**	**1,311-21,100**
Structure	0,112	0,206	0,029-1,449

Table 3: Cost unit cluster in puskemas and Clinics pratama

Average	Cluster	
	Puskesmas	Clinics Pratama
Cost Unit	97.686,98	74.133,45

Table 4. Qualitative analysis

Respondent answer	Total	Anderson factor category
Because BPJS hence its free	18	Income factor
Because of tooth sickness and wanted to be cured	20	Requirement factor
Because of habit	3	Access factor
Because puskesmas is near from Home	14	Access factor
Beacuase of the simplicity and cheap	5	Facility factor
Because it is mostly free	13	Income factor
Self-awareness	6	Requirement factor
Because of established procedure	19	Structure factor
Establish treatment flow	2	Structure factor
Because of simplicity since BPJS integrated	10	access factor

DISCUSSION

Service facility utilization of dental health provided by government is higher than private health service. According to Andersen and Davidson study conducted in Brazil, the result revealed there was significant relation between skin pigment, family number, income, nursing requirement between government tooth service utilization with private health service[1]. The difference of puskesmas and Clinics pratama in this research was related to the access variable which was dominant as well as income. The patient in Clinics pratama is namely including rich man used to go out pocket and after JKN they have been using it by affordable premium. Study conducted by stated that high-income people tend to utilize private health compare to low-income whereas one-fifth of which has been used this health service[2].

Access variable was dominant variable in Clinics pratama which associated with utilization. This circumstance because FKTP has been favorite before JKN. The cost of service seems no matter of wealthy meanwhile the accessibility has been main reason particularly geographical access since transportation payment.

Qualitative research result toward Clinics pratama was equal to what we got in quantitative research. Access factor was the dominant answer from respondents because of BPJS card and its simplicity", "Because of close to Puskesmas as FKTP", because of it's easy to get service since BPJS

The answer of distance from home or office to Clinics pratama was the main answer. National Health system need to involve private service which probably improve the accessibility and function. Mathematic model which was formulated from logistic regression is estimation value from dependent variable (Y) and Independent variable (X) ranging from 0-1, puskesmas cluster as the utilized place for dental health cure is affected by in the decision related to respondent's income. Moreover, Clinics pratama was utilized in association of accessibility.

Based of the unit cost calculation between puskesmas and Clinics pratama they have 97.686,98 and 74.133,45 respectively. This result unit is the average from 2 puskesmas and 2 Clinics pratama. We concluded that the cost for every patient member JKN in puskesmas is more expensive than Clinics pratama ot opposite. More importantly, we found that Cost unit value in puskesmas was higher than Clinics pratama meanwhile the infestation cost was excluded in puskesmas calculation while the Clinics pratama did. Compare to government's kapitasi payment, puskesmas is lower than 50% while clinic pratama lower than 20%. The Low of kapitasi value in puskesmas is related to its utilization value which half as what we found in Clinics pratama. As far as other countries are concern, Australia has preventive service and dentist emergency. Preventive service is including annual or once in six months, radiography checkup and dentist emergency service. Their government does not insure the payment of dental care with the reason of high cost. Because of curative and rehabilitative of dental care it is more expensive the government prioritize the prevention as well as water fluoridation, diet education, smoking limit, dental health promotion[3].

The expensiveness of dental care and society awareness on dental quality, the government encourage to use traditional insurance. Insurance administrator regulate various premium to the member depend on status and dental history. The requirement of treatment along with the rest of tooth decay was determined from the first application. Patient with high risk will be paying higher[4].

Thailand has been implemented JKN system since the year of 2002 from Universal Coverage Scheme (UCS) program. People will be paying only 30 bath /month. In terms of dental and oral health, Thailand government in UCS program applied balance of cost between promotion and maximal facility utilization[5].

German has obligatory insurance system which was followed by 87.5% from its resident. This insurance is mainly for collecting sick fund used for health provider. The premium of payment is vary depend on income or stratification. In dental service, the member right is to receiving dental care basic packet as like diagnose service and prevention. Further dental care including crown and bridge denture as well as ortodontik will be costed additionally. private sector and high income member can't be the member of govern insurance, they can choose to be member of private health insurance[6].

In the early 1990s was introduced Dental Health Maintenance Organization (DMHO), the guarantor contracts dentist for civil servant with kapitasi system for basic diagnostic scheme (Preferred Provider Organization or PPO) where the payment system embedded is cost-sharing. The member will be casted part of payment of health service with affordable cost. This is suitable for

England, United State applied managed care system to improve accessibility and optimization dental care service for occupant[7].

Kuba heath care system is coordinated by Ministry of Public Health thereby implemented National Health Sistem (NHS) founded by government. All of people will receive preventive service, curative and rehabilitative, from basic service, temporary checkup, dental care, hospital level service. Kuba employed family doctor in which doctor provide service of 100-150 families. Every doctor will be located in one united office. Every office has 3 specialists namely internal medicine specialist, obstetrician, and gynecologist and social employment[8].

Taiwan implemented National Health Insurance (NHI) system in which 99% involved. The member will be given ID card and can be used more 18000 health facilities which has been contracted in every country. The service offered such as inpatient, outpatient, dental care, Chinese traditional therapy, children health care, physical rehabilitation, nursing home, chronic mentality disease and other cares. All of dental care is secured by NHI except orthodontic dan prosthodontics [9].

Health payment in Malaysia is according to NHS system with fully financed by Ministry of Health. Dental care is divided into two categories (Primary oral health care and community oral health care). The former has number of programs namely: 1) preschool for the aged of 5-6, the program ranging from persuasive and preventive; 2) the school dental care, for student through school clinic and mobile dental clinics, 3) antenatal program for pregnancy ranging from visiting for checkup and education for dental and oral health; 4) elderly program for improving quality of *mature life*, 5) *special case and need*. dental care for outpatient such as tooth filling, tooth extraction, and scaling, The former is community oral health care in which the program included water fluoridation, dental and oral health promotion, oral cancer screening, and fissure sealant for student[10].

CONCLUSION

Cost unit calculation for every dental care service which affecting high kapitasi cost and in order to recommend for service products which suitable for certain kapitasi. The kapitasi result is still the range of estimation which approximate to government kapitasi. The value can be used for reference which characterized nearly the same with study location. Kapitasi model and simulation pattern can be employed in order to calculate present kapitasi and simulasi kapitasi,

Conflict of interest statement: The authors declare that there is no conflict of interest.

Ethical clearance: Health Research Ethics Committee, Faculty of Medicine Andalas University of Padang

RFERENCES

1. Pinto, R. D. S. Comparing Adult Users of Public and Private Dental Service in the State of Minar Gerais, Brazil. BMC Oral Health. 2014
2. Saksesna, P.. Health Services Utilization and Out of Pocket Expenditure at Public and Private Facilities in Low income Countries. Health Sistem Financing. 2010
3. Policy Statement Australian Dental Association Delivery of Oral Health Care: Funding: Capitation Dental Schemes. Australia: Australian Dental Association (ADA). 2014.
4. Biggs, A. Dental reform: an overview of universal dental schemes. Australian Parliamentary Library. 2012.
5. Jienmaneechotchai, S. Thailand Country Report on Quality of Dental Service. Asian Chief Dental Office Meeting. 2013
6. Dentists, C. O. E. 2014. EU Manual of Dental Practice 2008. version 4
7. Gutierrez, S. M., Mizota, T. dan Rakue, Y. Comparison of four health systems: Cuba, China, Japan and the USA, an approach to reality. Southeast Asian J Trop Med Public Health. 2003, 34, 937-46
8. Telesur. Healthcare System in Canada, U.S and Cuba http://www.telesurtv.net/english/telesuragenda/HealthcareSystemsinCanadaU.S.andCuba201407230078.html. 2015
9. Wu, T.-Y., Majeed, A. dan Kuo, K. N. An overview of the healthcare system in Taiwan. London Journal of Primary Care.2010.
10. World Health Organization (Who) . Malaysia Health System Review. Malaysia: Asia Pacific Observatory on Health Systems and Policies.2013.