

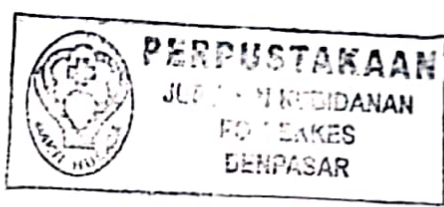
# Regional Development in Indonesia: **Some Notes** for the Jokowi Government



Editors:  
Hamid Paddu  
D.S. Priyarsono  
Arief Anshory Yusuf  
Djoni Hartono  
Budy P. Resosudarmo



Indonesian Regional  
Science Association



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## 7 HEALTHCARE SERVICE UTILISATION BY ELDERLY PEOPLE AND ADOLESCENTS IN INDONESIA

*Yuni Rahyani Ni Komang, Edy Purwanto,  
and Tiara Marthias*

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### INTRODUCTION

Groups of elderly people and adolescents require special attention. The former tends to face some problems, such as poverty, negligence, and disability that have a negative impact on their health and welfare (Departemen Sosial Republik Indonesia 2003); whereas the latter usually is faced with health problems caused by risky behaviours, such as traffic accidents, free sexual promiscuity that is vulnerable to contracting sexually transmitted infections (STI's), and psychiatric problems (World Health Organization/WHO 2008).

Healthcare services targeted to the adolescent age group ranging from 10 to 19 years old are still very low. The results of the last survey in Indonesia show that the level of adolescent visits to public and private healthcare facilities is no more than 17.0% (Survei Kesehatan Reproduksi Remaja Indonesia/SKRRI 2012). There is no certain number of adolescents who use healthcare facilities to obtain sexual and reproductive health services from health professionals. Sexual and reproductive health programmes for adolescents have not been a top



priority in various healthcare centres, especially for those who are at risk. A total of 80.0% of adolescents aged 10-15 years old are at risk, and 50.0% are at age of 15-19 years. Around 47.0% of 10-19 years old adolescents in the world are sexually active (CDC 2006), while the use of contraceptives to prevent the transmission of sexually transmitted diseases (STD) and unwanted pregnancy is still very low, including in Indonesia. Moreover, contraceptive services for adolescents in Indonesia are considered illegal (SKRRI 2007; 2012).

Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR), which remain high in Indonesia, are likely to be caused by low sexual and reproductive healthcare, inadequate health treatment, and poor nutrition. Low socio-economic status is associated with the low levels of education and other risky behaviors (World Health Organization/WHO 2000; 2004).

Healthcare programme for elderly people in Indonesia has been prioritized to maintain their health in addition to activities of daily living as stipulated by the Law No. 13 of 1998 on the welfare of the elderly (Departemen Sosial RI 2003). Elderly people mostly suffer from health problems related to the reduced ability of the muscles including the physical problems and trauma that affected by disability due to the visual impairments, cognitive decline, and even dementia (WHO 2009).

Due to those existing problems, there is a need for exploring data on the number of adolescents and elderly visits in healthcare facilities in several regions in Indonesia, such as Sumatra region (western part), Java - Bali (the middle), and other regions (eastern part). We conduct analysis by areas considering that the success of a health program is sometimes determined by geographic, demographic, and social and cultural factors (Hussein et al. 2012). According to Indonesia Health Profile 2013, there is a big difference in number of population in Java Island and other islands in Indonesia such as Maluku, Papua or Kalimantan. Population in Java Island is far greater than combined population in other islands. Population in Java Island alone accounted for 57% (141 millions) of the total population. However, there is a larger

proportion of poor people in East Nusa Tenggara and Papua Island, i.e., 31.5% and 20.2% respectively.

There is also a gap in the number of available healthcare services between areas, as evidenced in the ratio of community healthcare centres (Pusat Kesehatan Masyarakat/Puskesmas) to population in Papua and Java notably in Banten. West Papua Province is one of provinces that have high ratio of community healthcare centres (Puskesmas) to population (5.07/30,000 population) compared to Banten Province (0.6/30,000 population). Huge disparity between areas is also found in the number of Puskesmas that is able to conduct Pelayanan Kesehatan Peduli Remaja/PKPR program (Adolescent-care Health Service) between Java-Bali and outside Java-Bali region. Provinces with the lowest PKPR achievement is South Sulawesi and Central of Kalimantan (Indonesia Health Profile 2013)

This study will analyze the differences in adolescents and elderly visits to public and private health facilities by age group and by regions. The results are expected to contribute in finding ways to make the sexual and reproductive health services for adolescents becoming a priority in health service policies in Indonesia.

## **HEALTHCARE PROGRAMMES FOR ADOLESCENTS AND ELDERLY PEOPLE**

The number of elderly people in Indonesia was estimated around 74 million in 2000, or almost 25% of the population in 2050, and it was the fourth largest population in the world after China, India, and United States (Menkokesra 2001; U.S. Census Bureau 2011). However, Indonesian government policies in which is focus on elderly are still limited, though it is possible that the rapidly increasing number of elderly will not influence the condition of recent generation, but it does for future generation. Problems faced by elderly especially in developing countries including Indonesia are condition of acute and chronic diseases, non-infection diseases and trauma (Department of Health 2002). Therefore, healthcare programme for elderly people require an immediate follow-up.



In addition to the limited programme provided by the Government, healthcare insurance for elderly in developing countries is also non-existent. The previous study in developing countries including Indonesia showed that elderly people mostly live with their children. According to Lillard and Wills (1997), parents with low socio-economic condition are facing difficulties to access health service facilities in which the poor elderly having access to healthcare facility account for only 2% while the rich for 16%.

Meanwhile, adolescents belong to a vulnerable age group mostly facing physical, psychological, and social problemmes influenced by both internal and external factors (Kirby and Lepore 2007). Clinical information and services related to appropriate and accurate reproductive health are rarely available for adolescents. In addition, due to remote residence, adolescents in rural areas could hardly reach reproductive health service facilities. Different culture and behavior related to acceptable norms among adolescents in urban and rural areas could also be the factor influencing their reproductive health priority in avoiding problems, such as premarital sexual intercourse, unwanted pregnancy, and HIV/AIDS (Mepham 2001).

In Indonesia, during the previous Government clinical reproductive health services for adolescent with high risk were given by Indonesian Family Planning Center (IFPC), even-though the IFPC did not cover all of those services. Even worse, the ability of reproductive health services staff to give friendly services for adolescent is low, in which creates difficulty in building mutual trust feeling between the staff and adolescent.

### **Government Program in The Period of 1980- 2000**

In the early 1980s the Government had developed adolescent reproductive health programme in order to give them understanding about reproduction. This program was adjusted to family planning program (known as Keluarga Berencana/KB) that had succeeded in decreasing fertility and lowering the birth rate. This family planning program was applied mainly for married women through the use

of contraceptives. In 1980, the Government started implementing Population Health Education Programme in the national curriculum of education when policies related to Adolescent Reproductive Health (ARH) had been agreed. The main purpose of the program was to help young generation to understand issues related to improvement of awareness and knowledge about reproductive health and encourage them to change their attitude and behavior that is responsible to their reproductive health.

With the increasing risks of HIV/AIDS in 1997, Ministry of National Education initiated a school-based HIV/AIDS program policy. Since the monitoring and evaluation effort of sexual and reproductive health effort for adolescents is very low (Mephram 2001), national agenda on HIV/AIDS education is still in question (Utomo and McDonald 2009). Although the reproductive health program has been implemented since 1980s, the actual result is not visible yet. In solving these adolescent problems, there are several approaches that can be employed: (1) family approach; (2) peer group approach; (3) school institution approach, and (4) workplace approach. The efforts to make adolescent reproductive health as a national program has started since 1999, by including it into National Development Programme or known as Propenas (BKKBN 2001).

According to World Health Organization (WHO) in 1996, reproductive health effort must be made in a package covering the whole life cycle—i.e., from infant period to adulthood, including child health, adolescent health, infertility, violence, maternal health and safe motherhood, reproductive tract infection, sexually transmitted infection, HIV, cancer and aging problems. However, the reproductive health program for adolescent in Indonesia faced barriers due to the influence of culture and values believed by most of community which reject the use of contraceptives. Besides, efforts to integrate related-sectors, such as between National Family Planning Coordinating Board or BKKBN and Ministry of Health especially, still face problems in funding and implementing the sexual and reproductive health program for adolescents (Hull, Hasmi and Widyantoro 2004).



## The Government ARH Program in The Period after 2000

Since 2000, the Indonesian Government has made some improvements in its efforts to identify the needs of Adolescent Reproductive Health (ARH) program, policy options, and political dialogues related to the ARH issues. The Government's efforts have successfully managed to increase understanding on the importance of better reproductive health education in school, especially perception on epidemic of IMS and HIV/AIDS in Indonesia. Efforts have also been made to revise the challenges in reproductive health education and life skill in curriculum as well as adolescent-friendly reproductive health services and environment, which aims to ensure confidentiality and affordability without any stigma attached (Utomo and McDonald 2009).

The condition of sexual and reproductive health service for adolescents in Indonesia is also true to the health services for elderly. As mentioned previously, elderly people are vulnerably faced with limited resources. The Indonesian Ministry of Health has applied a new strategy in 2010-2014, which raised the vision for self-reliance and fairness of access for all Indonesians, including elderly group. Based on the UNFPA study, elderly people mostly suffered from infection which is caused by behavior and poor environment (Abikusno et al. 2007). However, those living in urban areas are more aware of utilizing healthcare service facility (Puskesmas) than those in rural areas (Kadar, Francis and Sellick 2012).

Elderly people look for treatment in several basic health service facilities, mainly in puskesmas, or from private doctor or paramedic. Healthcare services for elderly were mostly located at the municipal or provincial level, which obstructs those living in the rural areas. Since 2003 the Indonesian Government through the Coordinating Ministry for People's Welfare (Menkokesra) firstly proposed a strategic policy aimed to improve the welfare of elderly people by coordinating Government institutions' activities with community organization, private sectors, civil society organizations, and organizations representing elderly in Indonesia (Indonesian Social Department 2008). The other strategy made by the Government was providing homecare services for the



elderly, especially for those who were abandoned to be treated by nurse in the house or in *Panti Werdha* (home for elderly). In fact, the policy to provide homecare services for elderly in *Panti Werdha* did not succeed satisfactorily due to Indonesian culture that hardly accepts the reality of sending parents to elderly nursing home (*Panti Werdha*). Elderly people are mostly looked after and cared by their own children or relatives (Kadar, Francis and Sellick 2013).

### **Recent Development of Healthcare Services for Elderly**

Program for elderly which is still being developed up to now in Puskesmas is Puskesmas Santun, a programme that offers promotional, preventive, curative and rehabilitative services. It is focused on proactive role, ensuring the affordable services for elderly, as well as respecting elderly. The other on-going program is integrated post service or Posyandu for elderly. Community participation is highly expected to be integrated in services for elderly in Indonesia to improve the latter's health and welfare (Kadar, Francis and Sellick 2012).

So far there are a number of factors inhibiting the success of programme for elderly in Indonesia, among others: limited funding, low level of human resources trained staff for providing services, low government rules aimed to support effort of modifying health services types able to accommodate the needs of elderly (Loo 2001). According to Kadar (2011), however, most of health staffs, especially community nurses in rural areas, have been implementing elderly program in spite of their limited and low skills.

On the other hand, not all Puskesmas have provided health services for elderly and prioritized the program. Indonesia faced challenges for providing appropriate services for elderly, especially for them who suffer from degenerative or infectious diseases, as well as limited resources for implementing effective health services strategy. With those circumstances, some efforts have been identified: health services for elderly people should meet the following requirements: (1) availability; (2) accessibility; (3) affordability; (4) appropriateness, and (5) integrated with other health and social service providers (Kandiah-Evans 2006).

To date, adolescent reproductive and sexual health program have not yet shown any significant results. Those programmes are mostly conducted in senior high schools in the form of *Kelompok Siswa Peduli AIDS dan Napza (KS-PAN)* and *Pusat Informasi Komunikasi-Kesehatan Reproduksi Remaja (PK-KRR)* program. However, it is still difficult to conclude how effective they are in preventing adolescent from engaging themselves in risky behaviors, since there are not many programmes conducted to monitor and evaluate school-based or community-based reproductive program (Mepham 2001).

Adolescent reproductive health (ARH) program in the community health center or puskesmas in form of *Pelayanan Kesehatan Peduli Remaja* covers reproductive health socialization, medical service, counseling and education on Healthy Life Skill, peer-educator training and referral service (Kementerian Kesehatan RI, 2013). Data shows that the number of Puskesmas able to conduct PKPR has decreased from 3,191 Puskesmas in 2012 to 2,745 Puskesmas in 2013 (Kementerian Kesehatan RI, 2013). It is noticeable that there is difference between adolescent reproductive health programme and the health programme for the elderly as the latter requires more priority.

## USE OF DATA AND VARIABLE DESCRIPTION

This study utilizes information from the Indonesian Family Life Survey (IFLS) in 2007 conducted by the Survey Meter. Data were collected from 43,747 respondents in Indonesia. The dependent variable was a recorded number of adolescent and elderly visits to healthcare facilities in the past months, including their visits to all public and private hospitals, clinics, and physician/midwife/nurse practices. Scale variable measurement was nominal, which ranged from 0 = never and 1 = ever.

The independent variable was the socio demographic characteristics of respondents, including gender differentiated into male and female, age, socio-economic level is obtained from the amount of income minus total expenditure, and further divided into 5 levels (quintiles 1, 2, 3, 4 and 5). The level of education divided into primary education, middle/intermediate, and higher education. The residence was the area or



location where the respondents lived divided into urban and rural areas.

The intermediate variable was the variable that is more closely associated with a visit to health facilities, divided into regions included Sumatra, Java - Bali, and other/outside Java - Bali and Sumatra.

## RESULTS OF ANALYSIS

Out of 6,943 adolescents aged 10-19 years old, only 549 visited the healthcare facility, whereas out of 6,762 elderly people, only 567 utilized the healthcare facility. The samples were 1,016 adolescents aged 15-19 years old. The samples of elderly group were divided into groups with age ranging from 50-54 years old, 55-59 years old, 60-64 years old, 65-69 years old, 70-74 years old, and above 75 years old. The elderly men and elderly women who made the visits were 932 and 1,442 people, respectively. Thus, the number of visits to public and private health services by the elderly (17.3%) was twice the number of visits by the adolescent (8.1%).

The number of adolescent visits to health facilities was higher in Java -Bali area than in Sumatra and other regions, which accounted for almost 11.0% in the group aged 10-14 years old and 7.9% in the group aged 15-19 years old. The highest number of visits to the healthcare facility by the elderly group in Java-Bali, and Sumatra was shown made by those aged 65 years old and over (21.9% and 19.7%); whereas the highest number of visits in other areas visit was shown by the group aged 60-64 years old (17.8%). The highest number of elderly visits to health facilities was found in the group aged 65 years and above (20.7%). Thus, elderly visits were twice to three times higher than the adolescent visits to health facilities. Data on the number of adolescents and elderly visits to health facilities by region and age is shown in Table 1.

Table 1. Description of Visits to Health Facilities by Adolescents and Elderly by Region and Age (2007)

Age group (year)	Regions						Total of sample N=43,751	N
	Sumatra N=9,772		Java-Bali N=26,581		Others N=7,398			
	Yes (%)	n	Yes (%)	n	Yes (%)	n		
Adolescent:								
10-14	8.45	923	10.76	2,249	6.56	671	9.47	3,843
15-19	4.78	691	7.86	1,832	4.33	577	6.52	
Elderly:								3,100
50-54	18.41	353	14.79	1,190	12.81	281	15.19	1,824
55-59	17.94	301	14.92	858	12.57	191	15.26	1,350
60-64	19.61	204	17.27	660	17.82	174	17.82	1,038
65+	19.71	482	21.88	1,696	16.40	372	20.67	2,550

Source : Analysis of secondary data IFLS (2007)

Note: Others = the rest of Indonesia (outside Java-Bali and Sumatra regions)

Table 2 displays the results of the bivariable analysis of differences in socio-demographic characteristics among male and female adolescents aged 10-19 years old by region. Nearly 60.0% of male adolescents lived in rural areas of Sumatra, Java-Bali (36.5%) and 50.0% lived in other areas; and 50.0% of adolescent males lived in urban areas of other regions. Adolescents with a high socio-economic level, especially in the Java - Bali shows a higher number of visits to health facility. Nearly one quarter of visits to health facilities were conducted by adolescents from the high socio-economic group (quintile 4), showing a highly significant difference ( $p < 0.000$ ).

Male adolescents with low levels of education who visited a health facility was two times higher than those with the middle/intermediate education level, and the difference is highly significant ( $p < 0.000$ ). There is no significant difference between visits to health facilities by female adolescents with residence, low and high socio-economic level, and level of education factors ( $p > 0.05$ ). Only the middle socio-economic levels differed significantly by region ( $p < 0.01$ ).

Table 2. Results of Visits to Health Facilities Differences among Male and Female Adolescents with Socio-demographic Characteristics by Region (2007)

Variables	Regions				OR	95% CI
	Sumatera N= 9,772	Java - Bali N=26,581	Others N= 7,398	Total Sample N= 43,751		
	Yes (%)	Yes (%)	Yes (%)	Yes (%)		
<b>Male adolescent</b>	<b>n=56</b>	<b>n=184</b>	<b>n=31</b>	<b>n=278</b>		
<b>Residence</b>						
Rural	59.65	36.51	50	42.81	1.373	1.073 - 1.759*
Urban	40.35	63.49	50	57.19		
<b>Socioeconomic level</b>						
Quintile 1	14.04	19.58	31.25	19.78		
Quintile2	21.05	23.28	18.75	22.30	1.395	0.958 - 2.032*
Quintile3	29.82	17.99	25.00	21.22	1.491	1.019 - 2.162*
Quintile4	26.32	25.93	9.38	24.1	1.894	1.307 - 2.746***
Quintile5	8.77	13.23	15.63	12.59	1.362	0.878 - 2.11
<b>Education level:</b>						
Basic	64.91	61.38	50	60.79		
Midle	35.09	37.04	46.88	37.77	0.627	0.487 - 0.807***
High/university	0	1.59	3.13	1.44	0.954	0.338 - 2.697
<b>Female adolescent</b>	<b>n=54</b>	<b>n=189</b>	<b>n=36</b>	<b>n=288</b>	<b>OR</b>	<b>95% CI</b>
<b>Residence:</b>						
Rural	55.56	38.58	51.35	43.4	1.244	0.975 - 1.588
Urban	44.44	61.42	48.65	56.6		
<b>Socioeconomic level:</b>						
Quintile 1	22.22	20.81	24.32	21.53		
Quintile2	18.52	21.32	27.03	21.53	1.229	0.852 - 1.773
Quintile3	29.63	22.84	32.43	25.35	1.612	1.131 - 2.298**
Quintile4	20.37	17.26	16.22	17.71	1.188	0.808 - 1.747
Quintile5	9.26	17.77	0	13.89	1.303	0.860 - 1.973
<b>Education level:</b>						
Basic	59.26	49.24	51.35	51.39		
Midle	40.74	49.75	40.54	46.88	0.849	0.665 - 1.083
High/university	0	1.02	8.11	1.74	1.085	0.424 - 2.777

Source : Secondary data analysis IFLS (2007 )

Note : p < 0,05 \*; p < 0,01 \*\*; p < 0,001 \*\*\*

Odds Ratio (OR) is used to compare the relative odds of the occurrence of the outcome of interest, and to compare the magnitude of various risk factors for that outcome (visits of healthcare facilities). OR=1 (exposure does not affect odds of outcome), OR>1 (exposure associated with higher odds of outcome), and OR<1 is exposure associated with lower odds of outcome (Bland & Altman, 2000).



The results in Table 3 show the majority of male elderly who live in rural areas (51.3 %), with a middle and high socio-economic level especially in quintile 3 and 4 (20.9% and 22.4 % respectively). The higher number of visits to health facility is shown by male elderly who live in rural areas, although there was no significant correlation ( $p > 0.05$ ). Socio-economic and education levels of elderly males were significantly associated with their visit to health facility ( $p < 0.005$ ). There was no significant relationship between the residence and the middle education level and a visit to a health facility by the elderly ( $p > 0.05$ ). There was no significant relationship between the level of education and the visits to health facilities among elderly female ( $p > 0.05$ ). Socio-economic level and residence in rural areas were taken as strong predictors of elderly female visits to health facilities.

Multi-variable analysis involved all variables that were statistically significant and were analyzed together. The younger teens would reduce visits to health facilities or as a protective factor. Visits to health facilities were also associated with residence in urban areas as well as socio-economic level ( $p < 0.000$ ). Socio-demographic characteristics were significantly associated with a visit to health facilities ( $p < 0.000$ ).

Protective factors to health facilities include young age, residence (lives in Sumatra and other regions), as well as levels of education (middle and higher levels). Visits to healthcare facilities are higher for respondents with a high socio-economic level ( $p < 0.000$ ). Respondents with lower education levels will tend to use less healthcare services. Table 4 displays the results of multi-variable testing using Logistic Regression analysis, which shows the association between socio-demographic characteristics and visits to healthcare facility.

Table 3. Results of Differences between Visits to Health Facilities among Elderly Male And Female with Socio Demographic Characteristics by Region (2007)

Variables	Regions			Total sample	OR	95% CI
	Sumatera N=9,772	Java & Bali N=26,581	Others N=7,398			
	Yes (%)	Yes (%)	Yes (%)	Yes (%)		
Elderly male	n = 90	n = 294	n = 64	n = 474		
Residence:						
Urban	66.32	41.03	59.70	48.73		
Rural	33.68	58.97	40.30	51.27	1.08	0.89-1.31
Socioeconomic level:						
Quintile 1	11.58	15.06	20.90	15.19		
Quintile 2	18.95	23.08	20.90	21.94	1.55	1.13-2.14***
Quintile 3	23.16	18.91	26.87	20.89	1.60	1.16-2.21***
Quintile 4	21.05	23.08	20.90	22.36	1.99	1.45-2.75***
Quintile 5	25.26	19.87	10.45	19.62	2.00	1.44-2.79***
Education level:						
Basic	66.32	64.42	71.64	65.82		
Middle	25.26	26.28	22.39	25.53	1.12	0.89-1.41
High/university	8.42	9.29	5.97	8.65	1.50	1.04-2.16*
Elderly female	n=159	n=477	n=85	n=721		
Residence:						
Urban	50.31	40.46	54.12	44.24		
Rural	49.69	59.54	45.88	55.76	1.24	1.05-1.46*
Socioeconomic level:						
Quintile 1	11.95	16.77	16.47	15.67		
Quintile 2	19.50	18.03	29.41	19.69	1.56	1.19-2.04***
Quintile 3	22.64	22.85	22.35	22.75	1.78	1.37-2.32***
Quintile 4	23.27	22.85	22.35	22.88	2.04	1.57-2.66***
Quintile 5	22.64	19.50	9.41	19.00	2.11	1.60-2.78***
Education level:						
Basic	76.1	81.55	88.24	81.14		
Middle	19.5	14.68	11.76	15.40	1.20	0.95-1.51
High/university	4.4	3.77	-	3.47	1.30	0.82-2.05

Source : Secondary data analysis IFLS (2007 )  
 Note : p < 0,05 \*; p < 0,01 \*\*; p < 0,001 \*\*\*

Odds Ratio (OR) is used to compare the relative odds of the occurrence of the outcome of interest, and to compare the magnitude of various risk factors for that outcome (visits to healthcare facility). OR=1 (exposure does not affect odds of outcome), OR>1 (exposure associated with higher odds of outcome), and OR<1 is exposure associated with lower odds of outcome (Bland & Altman 2000).

Table 4. Correlation between Socio-demographic Characteristics and Healthcare Utilization among Adolescents and Elderly People Based on IFLS (2007)

Variables	OR	95% CI
Adolescent group (10-19 years old)	0.47	0.43 – 0.52***
Elderly group (50 years old and above)	2.14	1.90 – 2.42***
Residence: Urban	1.14	1.07 – 1.20***
Area/region: Sumatera	0.83	0.78 – 0.89***
Others	0.63	0.58 – 0.68***
Socio-economic level: Quintile 2	1.27	1.17 – 1.38***
quintile 3	1.42	1.31 – 1.55***
quintile 4	1.51	1.38 – 1.65***
quintile 5	1.61	1.46 – 1.77***
Education level: Middle	0.77	0.72 – 0.83***
High/University	0.76	0.68 – 0.86***
Pseudo R2:	0.03	
N	43.747	
Pseudo likelihood	-17772.13	

Source : Secondary data analysis IFLS (2007 )

Note :  $p < 0,05$  \*;  $p < 0,01$  \*\*;  $p < 0,001$  \*\*\*

Odds Ratio (OR) is used to compare the relative odds of the occurrence of the outcome of interest, and to compare the magnitude of various risk factors for that outcome (healthcare utilization/visit among adolescent and elderly).  $OR=1$  (exposure does not affect odds of outcome),  $OR>1$  (exposure associated with higher odds of outcome), and  $OR<1$  is exposure associated with lower odds of outcome (Bland & Altman 2000).



Table 5 shows the relationship between the independent and proximal variables and the visits to health facilities simultaneously by male and female respondents in all areas. The strongest predictors of visits to health facilities among adolescent males are middle level of education (95% CI = 0.44 - 0.75), middle-upper socio-economic level (95% CI = 1.26 - 2.80, 95% CI = 1.04 - 2.28), and living in other areas and Sumatra (95% CI = 0.39 - 0.86, and 95% CI = 0.53 - 0.99). This result is somewhat different from the female adolescent respondents in which the strongest predictors of their visits to health facilities are other regions (95% CI = 0.42 - 0.86), Sumatra (95% CI = 0.52 - 0.99), and middle socio-economic level (95% CI = 1.10 - 2.29).

Table 5. Correlation between Region and Socio-demographic Characteristics and Healthcare Utilisation among Male and Female Adolescents Based on IFLS (2007)

	Male adolescent		Female adolescent	
	OR	95% CI	OR	95% CI
Residence :				
Urban	1.25	(0.96 - 1.62)	1.15	(0.68 - 1.50)
Area/region:				
Sumatera	0.73	(0.53 - 0.99)*	0.72	(0.52 - 0.99)*
Others	0.58	(0.39 - 0.86)**	0.60	(0.42 - 0.86)**
Socioeconomic level:				
Quintile 2	1.41	(0.96 - 2.07)	1.22	(0.84 - 1.76)
Quintile 3	1.54	(1.04 - 2.28)*	1.59	(1.10 - 2.29)*
Quintile 4	1.88	(1.26 - 2.80)**	1.16	(0.78 - 1.73)
Quintile 5	1.41	(0.87 - 2.29)	1.22	(0.78 - 1.92)
Education level:				
Middle	0.58	(0.44 - 0.75)***	0.81	(0.63 - 1.04)
High/University	0.77	(0.25 - 2.34)	0.97	(0.36 - 2.60)
Pseudo R2:	0.02		0.01	
N	3.610		3.333	
Pseudo likelihood	-957.89		-969.19	

Source : Secondary data analysis IFLS (2007 )

Note :  $p < 0,05$  \*;  $p < 0,01$  \*\*;  $p < 0,001$  \*\*\*

Odds Ratio (OR) is used to compare the relative odds of the occurrence of the outcome of interest, and to compare the magnitude of various risk factors for that outcome (healthcare utilization/visit among male and female adolescent). OR=1 (exposure does not affect odds of outcome), OR>1 (exposure associated with higher odds of outcome), and OR<1 is exposure associated with lower odds of outcome (Bland & Altman 2000).

Table 6 shows the correlation between elderly male and female visits to health facilities and the independent and proximal variables. The result shows that all socio-economic levels are the strongest predictors of the elderly visits to health facilities ( $p < 0.005$ ). Elderly people with different socio-economic levels—from low-to-high—visit healthcare facilities. In this case, their visits were not influenced by factors, such as residence, region, and level of education.

Table 6. Correlation between Regions and Socio-demographic Characteristic and Healthcare Utilisation among Male and Female Elderly Based on IFLS (2007)

	Male elderly		Female elderly	
	OR	95% CI	OR	95% CI
Residence :				
Urban	0.95	(0.77 - 1.17)	1.10	(0.93 - 1.31)
Area/region:				
Sumatera	0.99	(0.767 - 1.27)	1.06	(0.86 - 1.30)
Others	0.90	(0.67 - 1.20)	0.80	(0.62 - 1.03)
Socioeconomic level:				
quintile 2	1.56	(1.13 - 2.15)***	1.55	(1.18 - 2.03)***
quintile 3	1.61	(1.16 - 2.24)**	1.75	(1.34 - 2.28)***
quintile 4	2.00	(1.42 - 2.81)***	1.97	(1.50 - 2.59)***
quintile 5	1.96	(1.35 - 2.86)***	2.01	(1.49 - 2.72)***
Education level:				
Middle	0.96	(0.75 - 1.24)	0.97	(0.75 - 1.26)
High/University	1.21	(0.80 - 1.82)	1.00	(0.63 - 1.61)
Pseudo R2:		0.01		0.01
N		3114		3648
Pseudo likelihood		-1315.36		-1790.13

Source : Secondary data analysis IFLS (2007 )

Note :  $p < 0,05$  \*;  $p < 0,01$  \*\*;  $p < 0,001$  \*\*\*

Odds Ratio (OR) is used to compare the relative odds of the occurrence of the outcome of interest, and to compare the magnitude of various risk factors for that outcome (healthcare utilization/visit among female and male elderly).  $OR=1$  (exposure does not affect odds of outcome),  $OR>1$  (exposure associated with higher odds of outcome), and  $OR<1$  is exposure associated with lower odds of outcome (Bland & Altman 2000).

## FACTORS AFFECTING VISITS TO HEALTHCARE CENTRES

The elderly visits were twice or three times higher than the adolescent visits to health facilities. Factors that might affect the quality of health services are among others: (1) the ethnicity and geography including



infrastructure; (2) healthcare provider; (3) communities including knowledge, attitudes, behaviours, and financial capability (WHO 2010). According to the WHO (2009), elderly females are generally poorer than elderly male, but in fact female had a longer life expectancy than male.

Elderly people usually have health problems which result in physical weakness and limitations that restrict their activities and their ability to work. Elderly are needs more help physically, socially, and economically from other family members (WHO, 2009). Gender difference was thought to affect access to health facilities, because it was indirectly related to the physical and financial ability. Elderly visits to health facilities were only affected by the economic level; and the visits by female and those by male are not much different in quantity.

Elderly at all economic levels need health services related to conditions or co-morbidities that exacerbate their health including cognitive functions. Aging is also associated with other causes that accompany increased morbidity (co-morbidity); for example, when an elderly person has a disease and physical disability at the same time, s/he will require significant treatment complications. Another example is the problem of visual impairment in the elderly that is prone to cause injury due to fall or other problems (WHO 2009).

Other factors that may affect the utilization of healthcare for the elderly are the socio-economic level, level of education and the area or region where they live (residence). The elderly are very dependent on other family members to get healthcare due to their limited physical ability and financial capability. Thus, the elderly with a higher socio-economic level will use more healthcare facilities.

Health financing including the cost of maintenance and transportation for the elderly is the biggest barrier to obtaining healthcare service. Evidence indicates that the poor people typically pay more from their own pockets, especially for the cost of medicines, and they are obliged to spend more when they want to get better care (Nahar and Costello 1998). In such case, the Government should play a major role in meeting the elderly needs for the healthcare financing.

Adolescent visits to health facilities are not affected much by the place where they live (residence), because the services are required by those who live in both urban and rural areas. Although adolescents live in Java-Bali, adolescents visits are still relatively low. Only a few adolescents who were sexually active using contraception methods, to prevent them from sexually transmitted infections (STI's). The research findings show that only 18.0% of female adolescents and 25.0% of male adolescents use condoms when having sex for the first time, and 27.0% of male adolescents use condom (SKRRI 2013). This is because of disseminating contraceptives for adolescents is considered unacceptable according the community's local values (SKRRI 2007).

Healthcare workers play an important role in sexual and reproductive health services to improve adolescent health and well-being. However, healthcare workers ability is still limited and even low to provide services for adolescents (Rosen 1996). They should play the role as a source of information on sexual and reproductive health problems, including sexually transmitted infections (SKRRI 2013). In other hand, the main source of information mostly comes from the school/teachers (65.0%), friends (32.0%), media and newspapers (34.0%), and television (28.0%).

According the survey report, only 2.1% of female adolescents received information on the ARH from health workers, in other hand that no male adolescents received it. Adolescents actually expect to be served by health professionals who have respect and honor and could keep their secrets (Ford and et al. 1996; Ginsburg and et all. 1995).

Previous evidence suggests that the most effective efforts to improve sexual and reproductive health of adolescents should be by the provision of adequate information and services from health providers (Bleakley et al. 2009). For example, if adolescents do not get any information and do not have adequate knowledge about efforts to prevent unintended pregnancies through safe and proper use of contraceptives in sexual practices, this condition will increase the number of unintended pregnancies and the spread of sexually transmitted infections will be growing very fast (WHO 2006; Santelli 1992). Thus, efforts to establish



a positive adolescent behaviour can be carried out by health providers or health workers in order to effectively improve adolescent sexual and reproductive health.

With the magnitude of the problems faced by adolescents today and in the future, there is a need to consider the Government's appropriate interventions done early. Health professionals should understand the components of adolescent growth and development from the physical, cognitive, and psycho-social conditions associated with health risks and protective factors as a basis to explore the whole history, physical examination, and health guide (Rosen 1996; Johnson and Malow-Iroff 2008). Determinant factors that could affect the quality of health services for adolescents and elderly are government policies, infrastructure, financial capability, the ability of healthcare providers, family, and values or beliefs (WHO 2010).

## CONCLUSION

The predictors used in this study are socio-economic level, education level, and geographic areas (residence factor). Adolescents' utilization of healthcare facilities can be influenced by several factors including: (1) low service quality, due to very limited knowledge, attitudes, and skills of workers to provide sexual and reproductive health services; (2) reproductive health programmes that were not standardized and not user-friendly, or sexual and reproductive health services for adolescents did not meet the needs of adolescents, such as guarantees of confidentiality and judgmental behavior of the health workers; (3) health services located in marginal areas which were uneven and very difficult to obtain by the adolescents; and, (4) research, monitoring and evaluation of healthcare initiatives for adolescents that had not done yet (WHO 2006).

One of the keys to lower costs for the healthcare of elderly and adolescents is to promote healthy behaviours that determine health from an early age, including healthy diet and regular physical activity. Healthy behaviours can increase life expectancy and slow the rise of chronic disease and disability. The Government including policy

makers and healthcare professionals/workers should consider effective and efficient services in reducing the negative impacts of adolescent risk behaviours as well as conditions that can degrade the health of elderly.

Due to the use of secondary data, this study was limited to explore the variables that have an impact on the utilization of health facilities by adolescents and elderly. The next study is expected to conduct monitoring and evaluation of reproductive health services for adolescents in healthcare centres by analyzing primary data.

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