Equity in access to healthcare in Brunei Darussalam: Results from the Brunei Darussalam Health System Survey (HSS)

by

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Myles Elledge

Thesis submitted in partial fulfillment of
the requirements for the degree of
Master of Science in the Global Health
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ABSTRACT

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Abstract

Background: Universal healthcare has been promoted by organizations including the World Health Organization and United Nations as a means of ensuring healthcare access for vulnerable populations. Despite momentum towards universal healthcare, especially among Southeast Asian nations, little research has been conducted to understand healthcare equity in nations that have already implemented universal healthcare. This paper assesses equity in healthcare access in Brunei Darussalam using results from the Brunei Darussalam Health System Survey (HSS).

Methods: Data were gathered using a nationally-representative survey of 1,197 households across four districts in Brunei Darussalam. The Health System Survey aimed to measure individual's expectations and utilization of the Brunei national healthcare system. Data were analyzed using descriptive statistics and multinomial logistic regression to identify respondent- and household-level characteristics that affect healthcare utilization and expenditures.

Results: HSS data suggest that healthcare utilization in Brunei varies by ethnicity, district of residence, health status, and income. When compared to other ethnic groups, Chinese households were significantly less likely to utilize public healthcare and significantly more likely to utilize private healthcare services. Indigenous groups also demonstrated significantly lower rates of private healthcare utilization

compared to other ethnicities. Temburong district had the lowest rates of both private and public healthcare utilization and was associated with a 2.67 decreased likelihood of using public healthcare in the past six months. When stratifying for health status, data indicate that healthcare utilization in Brunei is proportional to healthcare need, with 93 percent of respondents in poor health reporting using government hospitals 12 or more times in the past six months compared to 76 percent of respondents in excellent health reporting using healthcare only once in the past six months. Income was also found to be positively associated with increased healthcare expenditures and private healthcare use.

Conclusion: This study highlights an example of a universal healthcare system in Southeast Asia and indicates that a well-funded universal healthcare system can reduce significant utilization disparities. Substantial financial resources do not, however, guarantee equity among rural and minority populations and universal healthcare efforts should incorporate measures to understand and address barriers to healthcare among these groups.

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1. Introduction

Health system strengthening and universal healthcare coverage have been promoted in recent years by international organizations including the World Health Organization (WHO) and United Nations as a means of ensuring healthcare access for vulnerable populations (WHO, 2010a) (United Nations, 2012) (Swanson et al., 2010) (Lagomarsino, Garabrant, Adyas, Muga, & Otoo, 2012). Political and economic organizations, including the Association of Southeast Asian Nations (ASEAN), have also identified universal healthcare coverage as a regional priority (Tangcharoensathien et al., 2011). Despite increased momentum towards universal healthcare, little research has been conducted to understand how universal healthcare impacts healthcare access and equity (Mills, Ally, Goudge, Guapong, & Mtei, 2012) (Stuckler, Feigl, Basu, & McKee, 2010). Therefore, analyzing healthcare equity and access in nations with well-established universal healthcare systems, such as Brunei Darussalam, is essential as more nations move toward universal coverage.

Universal healthcare coverage can be implemented in a variety of ways, but most experts agreed on a standard definition (Lagomarsino et al., 2012). According to the WHO, universal healthcare includes the following components: 1) a health system that meets priority health needs through people-centered integrated care, 2) affordability, 3) access to essential medicines and technologies to diagnose and treat medical problems,

and 4) sufficient capacity of well-trained, motivated health workers to provide the services to meet patients' needs based on the best available evidence (WHO, 2012).

National healthcare schemes that aim to provide universal coverage may still be lacking in one or more of the WHO-defined priorities, despite being designed to provide healthcare for all (WHO, 2010b). It is within this context that Brunei Darussalam initiated a Master Plan for Health System and Healthcare Infrastructure aimed to comprehensively assess the nation's universal healthcare system following the WHO Health Sector Building Block methodology (Ministry of Health, 2013). This research paper will examine results of the Brunei Darussalam Health System Survey (HSS), which is one component of the Brunei Darussalam Master Plan project.

1.1 Background

Brunei Darussalam is a Sultanate located on the island of Borneo in Southeast Asia (CIA, 2014) (Australian Government, 2013). The population of Brunei is approximately 415,717 comprised mostly of Malay (66.3%), Chinese (11.2%), and Indigenous (3.4%) peoples (CIA, 2014). Brunei is rich in natural resources, mainly oil and natural gas, which results in its high per-capita gross domestic product (GDP) that was estimated by the World Bank to be USD$50,506 in 2010 (Ministry of Health, 2013) (CIA, 2014). Oil and gas make up 90 percent of government revenues and 95 percent of export revenues (Ministry of Health, 2013). Brunei is the second-wealthiest nation in Asia based on GDP per-capita (Ministry of Health, 2013).

Brunei is geographically comprised of four districts: Belait, Brunei-Maura, Temburong, and Tutong (Figure 1). The capital city, Bandar Seri-Begawan, is located in the Brunei-Maura district and is home to approximately 58 percent of Brunei's total population. The district of Temburong is physically isolated from the rest of the nation and is accessible by boat via the Brunei Bay or by car via Malaysia. Temburong is also the least populous district and is comprised of mostly rural undeveloped rainforest reserves. (CIA, 2014) (Ministry of Health, 2013)

Figure 1. Map of Brunei Districts (Fitzgerald, 2009)

Over the past two decades there has been an influx of foreign workers to Brunei, which has contributed to its diverse population. Foreign workers primarily come to Brunei from Indonesia, Malaysia, Philippines, and Thailand to work in the oil and gas industry and service sector (Ministry of Health, 2013). In March 2005, there were 76,157

documented foreign workers living in Brunei compared to 44,971 documented foreign workers in 1981. (Australian Government, 2013) (Azim, 2002)

Citizenship is determined according to the Brunei Nationality Law that defines a citizen as anyone born to parents who are Brunei citizens rather than birth within the country. Stateless permanent residents are given an International Certificate of Identity (ICI) and are not entitled access to services, including healthcare, education, housing support, and food subsidies. The majority of the Chinese population in Brunei are permanent residents as opposed to citizens and many are stateless (Gunn, 2000) (Minority Rights Group International, no date). Many Indigenous groups, including the Dusan and Iban, residing in Temburong District are neither citizens nor ICI registered due to high rates of illiteracy among these groups. (Ministry of Health, 2013)

1.2 Healthcare System Overview

Brunei Darussalam instituted single-payer universal healthcare for its citizens in 1958 and is one of 30 Asian nations currently providing universal healthcare coverage (New York State, 2011). According to the Ministry of Health, all medical and health related services are provided free-of-charge to the citizens of Brunei. Remote areas such as Temburong District are serviced by four Flying Medical Services (FMS) teams that provide primary care. Brunei's public healthcare network is comprised of 15 health centers, 10 health clinics, and 22 maternal and child health clinics. Brunei also has two private hospitals, Jerudong Park Medical Centre and Gleneagles JPMC, located in the

capital district of Brunei Maura. Brunei also has one private healthcare center, Panaga Health Centre, which is located in the Belait district. Jerudong Park Medical Centre and Gleneagles JPMC are specialty hospitals specializing in rehabilitation and cancer, and cardiac care, respectively. Care at both of these private hospitals is covered under the national health system for Brunei citizens if they are referred to the private hospital through a public healthcare facility. The majority of healthcare facilities are located along the coastal region (Figure 2). (Ministry of Health, 2013)

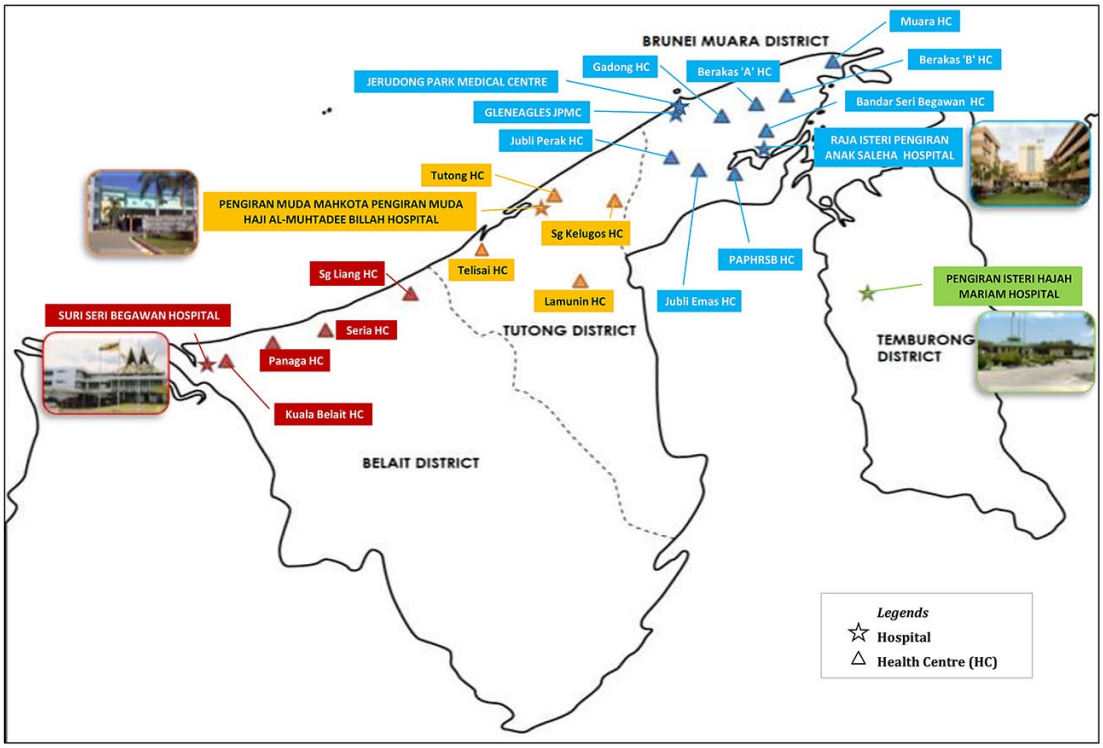

Figure 2. Map of healthcare facilities in Brunei Darussalam (Ministry of Health 2013)

In FY2011-2012 approximately 7.5 percent (BND$306.85 million) of Brunei's national budget was allocated for health services, representing a 3.9 percent increase from the

previous fiscal year. Per capita spending on health care also increased from FY2010-2011 to FY2011-2012 by BND$67. Actual government expenditures on healthcare have exceeded budgeted amounts for each fiscal year from 2006 to present, creating significant budget gaps that must be addressed (Figure 3). Despite budget overruns, however, Brunei spends a significantly lower percentage of its national income on healthcare compared to the majority of other nations in the world. (Ministry of Health, 2013)

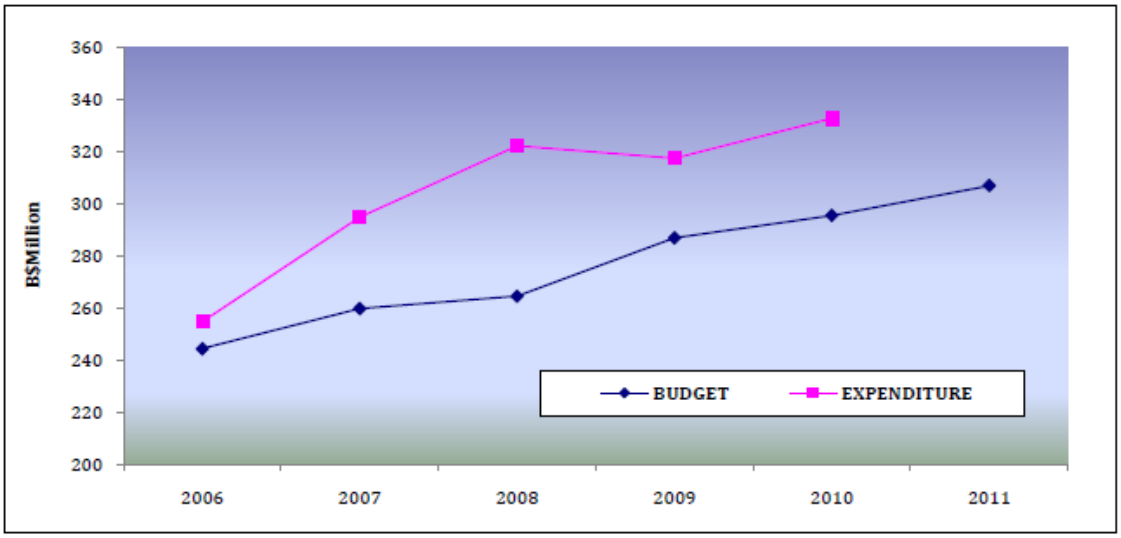

Figure 3. Government health expenditures (2006-2011) (Ministry of Health 2013)

Private healthcare expenditures in Brunei are low compared to other nations. Private or out-of-pocket expenditures are defined by the Brunei Ministry of Health as "direct payments to a health care provider—including co-payments and coinsurance—that is not paid for or reimbursed by the government, private insurance, an employer, or some other third party." (Ministry of Health, 2013) In 2009, the Ministry of Health

reported that private expenditures were equivalent to 0.37 percent of GDP or USD$185 per person annually. Although private spending is currently low, private healthcare is a growing sector in Brunei's economy. (Ministry of Health, 2013)

Overall, Brunei's health indicators are favorable. Life expectancy is the second highest in Southeast Asia and continues to rise. In 2011 life expectancy at birth was 78.1 years compared to 62.3 years in 1960. Furthermore, the Infant Mortality Rate (IMR) was 5.6 deaths per 1,000 live births in 2012 compared to 42.3 deaths per 1,000 live births in 1966. (Ministry of Health, 2013) (Oxford Business Group, 2013)

Like many developed nations, Brunei has made significant strides in eliminating infectious diseases, such as malaria, but has recently experienced an epidemiologic transition toward chronic disease that must be addressed through health system planning and resource allocation. Diabetes, obesity, heart disease, and cancers are occurring at higher rates among adults and children in Brunei and changes in lifestyle factors, including higher caloric intake, sedentary lifestyle, and smoking, suggest that the trend will continue to increase. (McKeown, 2009) (Ministry of Health, 2013) (Oxford Business Group, 2013)

1.3 Healthcare Equity and Access

Healthcare equity and access is determined by how a nation's healthcare system is structured and Southeast Asian countries have enacted diverse healthcare reforms in recent years. Four Southeast Asian nations, including Brunei, Malaysia, Singapore and

Thailand, have already achieved universal coverage, and other nations, including Indonesia, the Philippines, and Vietnam, are making progress towards universal healthcare (Tangcharoensathien et al., 2011).

Milton et al. discuss the importance of examining health inequities within universal healthcare schemes, like the one in Brunei, because despite their aim to provide healthcare coverage inclusive of all populations, these plans do not always achieve that goal (WHO, 2010b). In fact, equal access for all citizens depends on factors that cannot always be ensured through legislation, including gaining entry into the healthcare system, accessing a healthcare location where needed services are provided, and finding a health care provider with whom the patient can communicate and trust (Healthy People 2020, 2013).

Access to locations that provide essential healthcare services depends on several factors, including geographic proximity to healthcare providers (Healthy People 2020, 2013). Because Brunei's population is not equally distributed across its four districts, healthcare facilities are unevenly distributed as well. For example, the rural district of Temburong is primarily serviced by the flying medical service and has only one hospital (Ministry of Health, 2013). Therefore, Bruneian citizens residing in this district may have unequal access to healthcare services when compared to citizens residing in the capital district where numerous healthcare facilities are located. Furthermore, Temburong is an

exclave meaning that citizens must travel through Malaysia to reach healthcare facilities in mainland Brunei.

The World Health Organization defines health inequity as "avoidable inequalities in health between groups of people within countries or between countries"(World Health Organization, 2008). Health inequities can affect an individual's health status, their ability to access healthcare, and the quality of healthcare that they receive (Health Knowledge, 2009). Healthcare equity is sometimes referred to as vertical or horizontal equity. Vertical equity is defined as "the unequal treatment of unequals on the basis of morally relevant factors" such as need, ability to benefit, autonomy, and deservingness (Health Knowledge, 2009). Allocating healthcare services based on factors such as age, sex, ethnicity, income, class, and disability violates principles of healthcare equity. (Health Knowledge, 2009)

Horizontal healthcare equity implies that individuals should receive equal care for equal need regardless of socioeconomic status (SES) (R.J., E., M.S., & A.F., 2009). Korda et al. (2009) suggest that horizontal equity in universal healthcare schemes most often fails for ambulatory services. Furthermore, the authors purport that this is the case for Australia's universal healthcare system in which women of higher SES are more likely than women of lower SES to utilize ambulatory healthcare services. The WHO also notes that the Thai universal healthcare system does not have adequate funding to cover essential ambulatory medical procedures resulting in significant health disparities

(World Health Organization, 2010). When assessing Brunei's health system, it is important to understand how access to ambulatory services in public healthcare facilities differs from similar services in private facilities. Because ambulatory services may be elective and preventive in nature, lack of access to these services in public facilities may result in higher utilization among members of higher SES groups resulting in decreased access for individuals of lower SES. (R.J. et al., 2009)

One rationale for universal healthcare is improved population health (WHO, 2010a). Given Brunei's exceptional population health indicators, it is reasonable to assume that universal coverage has positively impacted health outcomes. Moreno-Serra and Smith conducted an evidence review to determine if expanded healthcare coverage, such as universal healthcare schemes, actually improved population health (Moreno-Serra & Smith, 2012). The authors conclude that the effects are context dependent, meaning that the poorest populations in the poorest countries benefit the most from expanded coverage. Furthermore, high-income countries that tend to have better healthcare systems and governance structures also benefit from expanded coverage; however the benefits are predominantly seen among the lowest SES segments of the population (Moreno-Serra & Smith, 2012).

UHC Forward recognizes four types of universal healthcare coverage, including the Beveridge Model, the Bismark Model, the National Health Insurance Model (NHIM), and the Out-of-Pocket Model (UHC Forward, 2013). The major difference among each of

these plans lies in how they are financed. The Beveridge Model is funded through government tax revenue and the government employs all medical personnel and determines reimbursement rates. Brunei's health system is classified as a Beveridge Model, although funding comes from alternative government revenue sources and not citizen taxation. The Bismark Model has been implemented in some Asian countries, including Japan, and mirrors an insurance scheme, however, insurers do not make a profit and it is funded through employer and employee contributions. The National Health Insurance Model blends characteristics of both the Beveridge and Bismark models and relies on private healthcare providers who are paid by the government. Examples of the NHIM include Canada, South Korea, and Taiwan. (UHC Forward, 2013) (The Commonwealth Fund, 2010)

Some countries have established universal healthcare systems using an out-of-pocket payment model, which raises concerns regarding healthcare equity and access (UHC Forward, 2013). Moreno-Serra and Smith note that high dependence on out-of-pocket payments frequently precludes individuals from receiving needed healthcare services (Moreno-Serra & Smith, 2012). Kenya is one example of a universal health program that relies on out-of-pocket payments which has proven to further inequity and prevent access for vulnerable populations who cannot afford fees for services (Mulupi, Kirigia, & Chuma, 2013). Similarly, Ensor and San note that rural populations in Vietnam were

more likely to delay or avoid utilizing essential healthcare services after user fees were introduced (Ensor & San, 1996).

Furthermore, households in countries that rely on out-of-pocket payment schemes are more likely to experience catastrophic health spending, which is defined as spending more than 10 percent of annual household income on healthcare (Tangcharoensathien et al., 2011). Tangcharoensathien et al. specifically note that pre-paid health insurance schemes have not proven to completely eliminate the risk of catastrophic spending for households in Asian nations (Tangcharoensathien et al., 2011). Because only Brunei citizens are eligible to receive national healthcare benefits, permanent residents, foreign workers, and Indigenous groups may be precluded from accessing healthcare services due to inability to afford out-of-pocket payments. In addition, the prevalence of catastrophic spending should be examined in Brunei among both citizens and non-citizens to determine if the universal healthcare system adequately protects individuals from burdensome costs and decreased access.

A literature search of PubMed yielded only two publications focused on the Brunei national healthcare system. The two publications by Anshari, et al. and Alumnawar et al. are related to e-health services in Brunei Darussalam and are not focused on overall health system outcomes (Almunawar, Wint, Low, & Anshari, 2012) (Anshari, Almunawar, Low, & Al-Mudimigh, 2012). Furthermore, Brunei is frequently excluded from studies of universal healthcare systems due to its high GDP and developed

economy (Tangcharoensathien et al., 2011) (The World Bank, 2014) (Lagomarsino et al., 2012). The same factors that often preclude researchers from including Brunei in their analyses, however, make Brunei a great case example of how universal healthcare affects access in a context with sufficient financial resources.

1.4 Study Purpose

The government of Brunei Darussalam has invested significant resources into the development of its healthcare system; however, prior to the Master Plan project no comprehensive national assessment of the healthcare system has been undertaken to determine if these government funds and initiatives are effective in improving the health of citizens and adequately addressing health needs.

This paper will focus on how healthcare access and equity in Brunei differ by individual respondent and household characteristics, as well as how respondents' perceived healthcare needs impact utilization of healthcare services. Specifically, the objectives of this research are:

1. To analyze how perceived healthcare need affects healthcare utilization and expenditures.
2. To identify key factors that affect healthcare utilization, including socioeconomic and demographic factors.

2. Methods

2.1 Study Design

The Brunei Darussalam Health System Survey (HSS) was conducted in 2013 and aimed to measure the general public's expectations and utilization related to the healthcare system in Brunei Darussalam (Appendix A.). Ethical approval was granted by the RTI International Institutional Review Board and the Brunei Darussalam Ministry of Health Ethics Board. This research was conducted by RTI International through a contract with The Innova Group and the Brunei Darussalam Ministry of Health.

2.2 Instrument Development

Content for the HSS questionnaire was developed by RTI International, Innova Corporation, and the Brunei Darussalam Ministry of Health through a series of planning and development meetings. The final HSS questionnaire was developed in English and translated into Malay by Bruneian native speakers of Malay. Translators adhered to best practice and translated the survey independently, after which two Ministry of Health staff members reviewed the two translations side-by-side (University of Michigan, 2011). The final translation was completed in conjunction with both translators and the Ministry of Health.

The HSS questionnaire was pilot-tested through 16 one-on-one interviews with members of the target population. Pilot-test respondents were recruited through personal networks and represented a variety of income, age, and social groups. The

pilot-test was conducted in two kampongs (villages) including one urban kampong and one rural kampong. Fourteen pilot-tests were conducted in Malay and two were conducted in English to test the English version of the questionnaire. The HSS questionnaire was revised based on pilot-test feedback to clarify question wording and structure.

2.3 Sampling Methodology

The HSS was conducted at the household level using a multi-stage stratified random sampling design. The sample represented adults age 18 years and older who speak either Malay or English and live in households in Brunei Darussalam. The sampling frame was based on 2011 census data provided by the government.

In order to examine heterogeneity across the four districts in Brunei, the sample was stratified by district and smaller districts such as Temburong were oversampled. Sampling weights were applied in the analysis to account for oversampling.

A multi-stage clustered design was used to improve the efficiency of survey implementation. Kampongs (villages) were sampled across the four districts (stage 1) and then households were selected within the sampled kampongs (stage 2). We selected eight kampongs in Belait, 28 kampongs in Brunei-Maura, seven kampongs in Temburong, and 10 kampongs in Tutong. Kampongs were randomly selected proportional to size, meaning that larger clusters within each district had a higher

probability of being selected due to their higher population. Finally, households within kampongs were randomly selected from the master census file.

2.4 Survey Implementation

A local Bruneian organization, the Centre for Strategic and Policy Studies (CSPS), recruited interviewers. A two-day interviewer training was conducted at CSPS on March 18 and 19, 2013. Fifty interviewers participated in the training and 41 were selected to participate in HSS data collection. Interviewers had completed a university education and were proficient in reading and speaking English and Malay. Many of the interviewers also had previous experience with survey implementation, including prior surveys conducted by CSPS and the University of Brunei Darussalam. The interviewer training consisted of a mix of participatory group sessions during which interviewers practiced administering the HSS instrument, and didactic sessions that taught field procedures. Training was conducted in English but interviewers practiced administering the survey in Malay.

The survey instrument (Appendix A) was read aloud and responses were recorded by the interviewer. The survey included 36 questions followed by a short respondent debriefing section that allowed respondents to share opinions about participating in the survey. On average the survey took half an hour to complete. Respondents were given a tin of healthy biscuits as an incentive for participating.

Interviewers visited sampled households and conducted interviews in teams of two following the protocol outlined in the interviewer manual. Teams were assigned supervisors from CSPS staff to monitor interview progress and ensure that proper procedures were being followed.

The sampling frame contained 1,723 households and 226 households were excluded because they no longer exist or did not speak Malay or English. Surveys were completed for 80 percent of the 1,497 eligible households resulting in a total of 1,197 completed surveys. Response rates varied by district and are presented in Table 1. The most common reasons for non-response were inability to find the household and no one at home despite repeated contact attempts.

Table 1. Survey response rate by district

District	*N*	*%*
Belait	205	*75*
Brunei Maura	568	*77*
Temburong	179	*93*
Tutong	245	*80*

2.4 Data Analysis

Data were entered and stored in Microsoft Excel 2007 (Microsoft, 2009) and analyzed using Stata v.13 (StataCorp, 2013). Sampling weights were applied to all analyses to account for oversampling in smaller districts.

Healthcare utilization was measured across public and private healthcare services using ordinal and dichotomous variables. Public healthcare was defined as government hospitals, government clinics, home visits, and other services. Private healthcare services included Jerudong Park Medical Centre Hospital, private clinics or doctors in Brunei, and private clinics or doctors abroad. Use of herbal and traditional medicine was captured separately and is excluded from this analysis. All healthcare utilization data were based on a recall period of six months.

The HSS contained questions pertaining to respondent and household-level healthcare utilization. Because these data were captured at different levels, analyses for respondent- and household-level utilization were analyzed separately. The survey asked respondents how many times in the previous six months they and members of their household utilized different types of public and private healthcare based on six categories of utilization ranging from zero times to twelve or more times. This range of healthcare utilization was analyzed using ordinal variables.

Dichotomous variables were created to differentiate between households who reported using healthcare services zero times in the previous six months versus one or more times. Because individual and household utilization were measured using separate survey questions, new variables were created to combine individual and household utilization resulting in a dichotomous comprehensive measure of household healthcare use. If neither the individual nor any members of the household utilized any type of

public healthcare in the past six months they were coded as "0" for the new variable "usedpublic." If the individual or any member of the household used any type of public healthcare in the past six months they were coded as "1" for "usedpublic." The same coding logic was used for private healthcare utilization using the variable "usedprivate." This dichotomous measure allowed trends in utilization to be observed and then further investigated using ordinal variables and multinomial logistic regression modeling. Furthermore, modeling this dichotomous variable was preferable in instances where variables contained too few observations to run a proper logistic model with the ordinal variables.

Perceived healthcare need was defined as respondents' self-reported health status using ordinal variables ranging from excellent to poor. Expenditure data was derived from an ordinal measure of total household spending on private healthcare in the six-month recall period and served as a proxy measure for total out-of-pocket healthcare spending given that all other healthcare expenses are covered through the national healthcare program. Expenditures were measured using an ordinal scale ranging from BND$0 to BND$5,000 or more.

Demographic and socioeconomic characteristics were gathered using a series of respondent background questions. Age and household income were coded as ordinal variables. Citizenship, ethnicity, district of residence and employment status were coded as categorical variables. These variables were then compared to public and private

healthcare utilization and expenditures using descriptive statistics and multinomial logistic regression. Multinomial logistic regression was chosen because a proportional odds assumption test yielded significant results ($p > 0.05$), indicating that ordinal logistic regression was not a good fit for the data.

2.5 Limitations

One possible limitation of these results is that the HSS collected self-reported health status, utilization, and expenditure data. Respondents may have inaccurately recalled healthcare utilization and expenditures over the 6-month recall period. Similarly, respondents were asked to recall healthcare utilization and expenditures for the entire household which may have resulted in recall errors. For the purposes of this research, healthcare need was derived from a survey question that asked respondents to rate their general health status on a scale ranging from excellent to poor. This definition is limited and reliant on subjective self-ratings.

The sampling frame was based on 2011 census data but may not have adequately captured foreign workers or temporary residents; therefore, inferences about healthcare equity for these populations are limited. Furthermore, benchmark data used to interpret results of the HSS are limited to documents provided by the Ministry of Health and therefore data validity and accuracy are contingent upon the validity and accuracy of government data sources. This survey assessed many perceptions and expectations of

the Brunei healthcare system that may influence healthcare utilization; however, these factors were not included in the analysis due to the limited scope of this paper.

3. Results

3.1 Respondent Characteristics

Respondent characteristics by district are displayed in Table 2. Forty percent of respondents were between 18-39 years of age, and 45 percent were between 40-59 years of age. Only 15 percent of respondents were older than 60 years of age. Eighty-two percent of respondents were Brunei citizens, and percentages of permanent residents in Belait and Temburong were much higher than the percentages of permanent residents in other districts. The higher percentages represent higher numbers of foreign workers in Belait where the majority of the oil and gas industry is located, and higher numbers of stateless Indigenous groups in Temburong. Overall respondent characteristics reflect national population statistics, thus indicating that the HSS sample accurately represents the total population of Brunei.

Table 2. Demographic and socioeconomic characteristics of adult respondents by district

	Belait		Brunei Muara		Temburong		Tutong		Total	
Age (in years)	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
< 30	33	*17*	113	*20*	30	*17*	44	*19*	220	*19*
30–39	44	*22*	118	*20*	60	*31*	48	*20*	270	*21*
40–59	102	*48*	255	*45*	59	*33*	119	*49*	535	*45*
60+	26	*13*	82	*15*	30	*19*	33	*12*	171	*15*
Citizenship										
Brunei citizen	151	*71*	475	*83*	141	*77*	223	*92*	990	*82*
Permanent resident	29	*19*	35	*7*	31	*19*	10	*4*	105	*9*
Temporary resident	21	*8*	36	*7*	5	*4*	6	*3*	68	*6*
Others	3	*2*	22	*4*	2	*1*	5	*1*	32	*3*
Ethnicity										
Brunei Malay	121	*63*	405	*78*	89	*74*	150	*84*	765	*76*
Indigenous	13	*2*	47	*1*	79	*20*	56	*3*	195	*2*
Chinese	44	*23*	72	*14*	4	*2*	27	*8*	147	*14*
Other	27	*12*	44	*8*	7	*4*	12	*5*	90	*8*
Highest educational attainment										
University	24	*9*	100	*18*	9	*4*	38	*14*	171	*16*
A level	46	*23*	102	*18*	14	*8*	32	*13*	194	*18*
ONC, vocational school	25	*12*	28	*5*	11	*5*	12	*5*	76	*6*
Lower or upper secondary school	88	*45*	275	*49*	96	*54*	118	*48*	577	*49*
Primary school	17	*8*	40	*7*	33	*19*	26	*11*	116	*8*
Other*	4	*2*	16	*3*	15	*10*	18	*8*	53	*4*
Household income (monthly)**										
Less than $1,000	30	*16*	100	*18*	46	*30*	54	*24*	230	*19*
$1,000–$1,999	38	*22*	116	*21*	69	*39*	52	*22*	275	*22*
$2,000–$3,999	63	*31*	158	*29*	47	*24*	71	*30*	339	*29*
$4,000 or more	67	*31*	181	*32*	13	*7*	62	*24*	323	*31*

*Less than primary school
**All currency reported in BND

3.2 Healthcare Utilization by Respondent Characteristics

To explore how public healthcare utilization differed by respondent characteristics, multinomial logistic regression was used to analyze how independent variables including respondents' age, citizenship status, ethnicity, employment status, income, and district of residence affected public healthcare utilization (Table 3).

Respondents between ages 40 and 59 years reported significantly lower rates of public healthcare utilization in the past six months when compared with all other age groups. Specifically, 40-59 year olds were 1.67 times less likely to utilize public healthcare when compared to respondents between 19 and 29 years old. Respondents over age 60 were not significantly more likely to utilize public healthcare compared to respondents in other age groups.

Brunei citizenship was compared to other citizenship categories, including permanent resident, temporary resident, and other. Respondents who identified as temporary residents or other were significantly less likely to utilize public healthcare compared to Brunei citizens. Specifically, temporary residents were 7.90 times less likely to utilize public healthcare compared to citizens, and respondents who classified themselves as "other" were 5.80 times less likely to utilize public healthcare compared to citizens.

Ethnicity did not have a significant impact on public healthcare utilization when looking at respondent-level data, and no ethnic groups were significantly more likely

than Brunei Malay to utilize public healthcare. Similarly, income was not a significant predictor of public healthcare utilization at the respondent level.

When compared to employment in the government sector, respondents who were employed in the private sector were 2.18 times less likely to utilize public healthcare. Similarly, respondents who were retired were 2.72 times less likely to utilize public healthcare compared to government sector employees. Unemployed respondents did not demonstrate significantly lower rates of public healthcare utilization when compared to government sector employees.

Respondents who were residents of Temburong reported significantly lower rates of public healthcare utilization when compared to all other districts in Brunei. Specifically, Temburong residents were 3.17 times less likely to utilize public healthcare when compared to residents of other districts.

Overall, the majority of respondents rated their health as good (43%) and few people reported excellent or poor health (9% and 1%, respectively). Among all respondents, those who reported fair health were significantly more likely to utilize public healthcare when compared to respondents in excellent health. Respondents in poor health did not demonstrate significantly higher rates of public healthcare utilization.

Table 3. Effect of respondent characteristics on public healthcare utilization over 6 months

Independent Variables	Multinomial Logit Estimates[a]	Relative Risk Ratio
Age		
30-39	-0.18* (0.28)	1.20
40-59	-0.51** (0.26)	1.67
≥ 60	0.40* (0.33)	0.67
Citizenship		
Permanent resident	-0.60* (0.34)	1.83
Temporary resident	-2.06** (0.47)	7.90
Other	-1.76** (0.54)	5.80
Ethnicity		
Other Brunei Malay	-0.09* (0.28)	1.10
Other Indigenous	0.45* (0.50)	0.63
Chinese	-0.31* (0.03)	1.37
Other	0.30* (0.47)	0.74
Employment Status		
Employed, private sector	-0.78** (0.28)	2.18
Self-employed	-0.57* (0.41)	1.78
Retired	-1.00** (0.33)	2.72
Not employed	-0.35* (0.27)	1.42
Monthly Income		
$1,000-$1,999	0.19* (0.28)	0.82
$2,000-$3,999	0.03* (0.27)	0.97
≥ $4,000	-0.25* (0.27)	1.28
District of Residence		
Brunei Maura	0.16* (0.24)	0.85
Temburong	-1.15** (0.32)	3.17
Tutong	0.60* (0.32)	0.55
Health Status		
Very Good	0.07* (0.31)	0.94
Good	0.45* (0.30)	0.64
Fair	0.99** (0.35)	0.37
Poor	1.74* (1.14)	0.17

*p>0.05, **p≤0.05

[a]Multinomial logit coefficients are reported first, followed by standard errors in parentheses.

3.3 Healthcare Utilization and Expenditures by Household Characteristics

3.3.1 Public Healthcare Utilization

Household public healthcare utilization was stratified by household characteristics, including citizenship status, ethnicity, income, and district of residence (Table 4). Multinomial logistic regression indicated that public healthcare utilization was significantly lower among temporary residents and households who characterized their citizenship as "other." When compared to Brunei citizens, temporary residents were 8.00 times less likely to utilize public healthcare, and "other" households were 5.55 times less likely to utilize public healthcare. Permanent residents were not significantly less likely to utilize public healthcare compared to citizens.

Among all ethnic groups only Chinese households demonstrated significantly lower public healthcare utilization compared to Brunei Malay households. Specifically, Chinese households were 2.06 times less likely to utilize public healthcare in the past six months.

Monthly household income was not a significant predictor of household public healthcare utilization. Households in the highest income group (≥$4,000 per month) were less likely to utilize public healthcare; however, the difference was not significant when compared to other income groups.

Data indicate significant differences in public healthcare utilization based on district of residence. Residents of Temburong were 2.67 times less likely to utilize public healthcare compared to residents of other districts. Tutong residents, however, were 38 percent more likely to utilize public healthcare compared to residents of other districts.

Table 4. Effect of household characteristics on public healthcare utilization over 6 months

Independent Variables	Multinomial Logit Estimates[a]	Relative Risk Ratio
Citizenship		
Permanent resident	-0.59* (0.36)	1.80
Temporary resident	-2.08** (0.48)	8.00
Other	-1.71** (0.54)	5.55
Ethnicity		
Other Brunei Malay	-0.10* (0.33)	1.10
Other Indigenous	0.40* (0.54)	0.67
Chinese	-0.72** (0.33)	2.06
Other	-0.30* (0.48)	1.34
Monthly Income		
$1,000-$1,999	0.30* (0.31)	0.74
$2,000-$3,999	0.12* (0.30)	0.89
≥ $4,000	-0.20* (0.30)	1.22
District of Residence		
Brunei Maura	0.26* (0.27)	0.77
Temburong	-0.98** (0.34)	2.67
Tutong	0.97** (0.38)	0.38

*p>0.05, **p≤0.05

[a]Multinomial logit coefficients are reported first, followed by standard errors in parentheses.

3.3.2 Private Healthcare Utilization

Household private healthcare utilization was stratified by household characteristics, including citizenship status, ethnicity, income, and district of residence (Table 5). Citizenship was not a significant predictor of private healthcare utilization. Ethnicity was significant, however, for households who reported being Other Indigenous or Chinese. Other Indigenous households were 28 percent less likely to utilize private healthcare when compared to Brunei Malay households. Conversely, Chinese households were 1.71 times more likely to utilize private healthcare when compared to Brunei Malay households.

Household income was a significant predictor of private healthcare utilization. When compared to the lowest income group (≤$1,000 monthly), all income categories utilized significantly more private healthcare. Furthermore, monthly household income was positively associated with higher private healthcare utilization. Households in the highest income group (≥$4,000) were 3.46 times more likely to utilize private healthcare compared to households in the lowest income group (≤$1,000). Households who reported monthly income of $2,000-3,999 were 2.25 times more likely to utilize private healthcare and households who reported $1,000-$1,999 were 1.70 times more likely to utilize private healthcare compared to the lowest income group.

District was also strongly correlated with private healthcare use. The highest private utilization was reported in Brunei Maura (58%) and the lowest was in

Temburong (8%). Tutong (39%) and Belait (45%) reported moderate rates of private healthcare utilization. Multinomial logistic regression also indicates that district of residence is a significant predictor of private healthcare utilization for both Brunei Maura and Temburong. A positive relationship was observed between residence in Brunei Maura and increased private healthcare utilization. Residents of Brunei Maura were 1.85 times more likely to use private healthcare compared to other districts. Residents of Temburong, however, were 22 percent less likely to utilize private healthcare services compared to other districts.

Table 5. Effect of household characteristics on private healthcare utilization over 6 months

Independent Variables	Multinomial Logit Estimates[a]	Relative Risk Ratio
Citizenship		
Permanent resident	-0.13* (0.30)	0.88
Temporary resident	-0.02* (0.42)	0.98
Other	0.24* (0.48)	1.27
Ethnicity		
Other Brunei Malay	-0.25* (0.22)	0.78
Other Indigenous	-1.27** (0.64)	0.28
Chinese	0.54** (0.24)	1.71
Other	-0.01* (0.39)	1.00
Monthly Income		
$1,000-$1,999	0.53** (0.21)	1.70
$2,000-$3,999	0.81** (0.20)	2.25
≥ $4,000	1.24** (0.20)	3.46
District of Residence		
Brunei Maura	0.61** (0.18)	1.85
Temburong	-1.52** (0.31)	0.22
Tutong	-0.06* (0.21)	0.94

*p>0.05, **p≤0.05

[a]Multinomial logit coefficients are reported first, followed by standard errors in parentheses.

3.3.3 Private Healthcare Expenditures

To determine if healthcare expenditures correspond to perceived health need in the six-month recall period, household private healthcare expenditures were analyzed by self-reported health status (Table 6). Respondents with poor health reported spending a moderate amount on private healthcare in the prior six months. The highest rates of healthcare spending occurred amongst individuals who reported good health.

Table 6. Household private healthcare expenditures over 6 months by health status*

Health Status	$0		$1-$149		$150-$499		$500 or more		Total
	N	%	N	%	N	%	N	%	N
Excellent	9	*15*	25	*8*	9	*10*	5	*20*	48
Very Good	17	*29*	85	*27*	21	*22*	6	*24*	129
Good	18	*31*	133	*42*	40	*43*	14	*56*	205
Fair	15	*25*	65	*21*	21	*22*	12	*48*	113
Poor	0	*0*	5	*2*	3	*3*	0	*0*	8
Total (N)	59		313		94		37		503**

*All currency reported in BND

**Total N includes only inviduals who reported private healthcare utilization in past 6 months

Healthcare expenditures among households that utilized private healthcare did not vary significantly based on citizenship status (Table 7). Expenditures in this group were nearly equal for citizens and non-citizens, with 89 percent of non-citizens and 88 percent of citizens spending any money on private healthcare in the previous six months. The majority of households that utlized private healthcare reported spending between BND$1-$149 on private healthcare in the past six months, regardless of citizenship status. A small percentage reported spending more than BND$2,000; however, 11 percent of permanent residents spent BND$2,000 or more compared to two percent of Brunei citizens and three percent of temporary residents.

Table 7. Household private healthcare expenditures over 6 months by citizenship status*

Citizenship	$0		$1-$149		$150-$499		$500 or more		Total
	N	%	N	%	N	%	N	%	N
Brunei Citizen	51	*12*	266	*63*	75	*18*	28	*76*	420
Permanent Resident	4	*11*	21	*57*	7	*19*	5	*14*	37
Temporary Resident	4	*13*	16	*52*	7	*23*	4	*11*	31
Other	1	*7*	9	*60*	5	*33*	0	*0*	15
Total (N)	60		312		94		25		503**

* All currency reported in BND

**Total N includes only inviduals who reported private healthcare utilization in past 6 months

Households that reported high levels of income were most likely to use private healthcare and 90 percent of respondents making more than BND$4,000 per month spent money on private healthcare during the six-month recall period (Table 8). Eighty-two percent of those making less than BND$1,000 per month spent money on private healthcare during the six-month recall period and the majority of these households spent less than BND$149.

Table 8. Household private healthcare expenditures over 6 months by monthly household income*

	Expenditures										
Monthly Household Income	**$0**		**$1-$149**		**$150-$499**		**$500-$1,999**		**$2,000 or more**		**Total**
	N	%	N	%	N	%	N	%	N	%	N
Less than $1,000	10	*18*	34	*61*	9	*16*	2	*4*	1	*2*	56
$1,000-$1,999	11	*12*	60	*67*	14	*16*	3	*3*	2	*2*	90
$2,000-$3,999	18	*12*	94	*62*	31	*21*	7	*5*	1	*1*	151
$4,000 or more	19	*10*	116	*60*	40	*21*	12	*6*	8	*4*	195
Total (N)	58		304		94		24		12		492**

*All currency reported in BND

**Total N includes only inviduals who reported private healthcare utilization in past 6 months

4. Discussion

4.1 Key Findings

The HSS gathered input from the general public in Brunei about expectations and patterns of utilization related to the national healthcare system. The aim of this research paper is to use HSS data to determine if the Brunei national healthcare system provides equitable access to healthcare across varying health needs and consumer characteristics.

Perceived health status was found to be a significant indicator of healthcare utilization for both public and private care. As expected, those with poor health used healthcare services more often than those reporting excellent health. This finding may indicate that utilization is proportional to health need, which would be ideal for a properly functioning health system. This survey, however, did not adequately assess whether or not respondents in poor health received sufficient healthcare.

Respondents with higher income were more likely to report better health status and higher private healthcare utilization. Survey results suggest that wealthier individuals are healthier and are able to spend money on additional healthcare services not covered under the national healthcare system. The association between socioeconomic status and health has been well documented in academic literature, and Roos and Mustard (1997) explored differences in healthcare access among SES groups under the Canadian universal healthcare system. The authors determined that lower SES groups utilized acute hospital care and primary care services more frequently than higher SES groups;

however, similar rates were observed for ambulatory services because higher SES groups were better able to navigate the healthcare system and receive care for less critical medical conditions (Roos & Mustard, 1997). Lower-income households and unemployed respondents in Brunei reported utilizing healthcare at a comparable rate to more average income levels suggesting that low income does not result in significantly decreased healthcare access. Per the findings of Roos and Mustard, however, this may indicate that higher SES groups are more likely to utilize healthcare due to minor complaints, whereas, lower SES groups may avoid healthcare until more severe health conditions develop (Roos & Mustard, 1997).

Significant differences in healthcare utilization were observed among rural and Indigenous populations. Temburong district was associated with the lowest rates of healthcare utilization for both public and private services. As previously described, Temburong is the most rural district in Brunei and is geographically isolated from mainland Brunei. Temburong also contains the fewest healthcare facilities and the largest proportion of Indigenous groups compared to other districts. Based on these factors, it is not surprising that residents of Temburong experience decreased access to healthcare services. The government of Brunei established services such as the flying medical service to increase healthcare access for residents of remote areas like Temburong, however, HSS data suggest that these services are not widely utilized and that Temburong residents and Indigenous populations continue to utilize healthcare

services less than other populations in Brunei. Voeks and Sercombe describe healthcare seeking behavior among a small Indigenous group in Temburong district and suggest that their hunter-gatherer lifestyle results in greater reliance on plant medicine and spiritual healing and reduced healthcare utilization, although their use of government health services has increased in recent years. Ethnographic research suggests that Indigenous groups in Brunei are transitioning toward traditional employment and mainstream religious beliefs, and therefore will play an increasing role in Bruneian society in the coming years, including increased utilization of the national healthcare system. (Voeks & Sercombe, 2000)

Findings also indicate that temporary residents and minority groups utilize the public healthcare system significantly less than citizens. This trend may be explained by alternative healthcare utilization, including temporary residents delaying healthcare utilization until they return to their home country, or minority groups being more likely to seek alternative forms of medical care (Voeks & Sercombe, 2000). Private healthcare expenditures and utilization did not differ significantly for citizens and non-citizens; however, this is not an accurate measure of the equity of healthcare access. Non-citizens may be underutilizing both public and private healthcare services due to out-of-pocket costs. Furthermore, non-citizens may be more likely to utilize private health services because they perceive it to be better quality than public healthcare.

4.2 Conclusion and Implications for Future Research

The Brunei Darussalam Health System Survey provides insight into citizens' perspectives of a universal healthcare system in Southeast Asia. The context for this study was unique in that Brunei Darussalam's country profile and GDP are inimitable compared to most other nations in the world; however, this does not preclude making inferences about the utility of similar healthcare systems in other contexts. Despite reduced financial barriers and the presence of remote medical services like the flying medical service, rural populations are still less likely to utilize the healthcare system when compared to populations residing in more urban areas. This finding demonstrates the challenges associated with ensuring equal access for rural populations, especially when populations are geographically isolated from the mainland, which is common in many Southeast Asian nations. Universal healthcare planning should prioritize rural populations to ensure that equal access is achieved and follow-up studies should be conducted to understand population-specific barriers to healthcare.

Non-citizens are also less likely to utilize government healthcare in Brunei, however the reasons for this were not adequately captured in the HSS because it was primarily targeted towards Brunei citizens. Future research should investigate how non-citizens interact with the national healthcare system and assess whether or not healthcare needs are going unmet in this population. Furthermore, as the population of foreign domestic workers increases in Brunei non-citizen healthcare utilization should be included in

national healthcare planning efforts in order to adequately forecast future healthcare demand and ensure that adequate resources are available.

Qualitative data collection would enhance further studies of the Brunei national healthcare system by exploring citizens' expectations of and experiences with the healthcare system. Healthcare access and equity is one way to assess the effectiveness of the national healthcare system, however, healthcare quality and outcomes must also be analyzed to determine if healthcare is both accessible and effective. Furthermore, the HSS provides a baseline understanding of citizens' attitudes and perceptions and would be enhanced by implementing the HSS again at regular intervals to understand how attitudes and behaviors change over time.

Brunei ranks low on international measures of civil liberties and human rights, meaning that the HSS is a symbolic effort to gather feedback from the general population (Ministry of Health, 2013). The government's interest in the opinions of its citizens will give voice to individuals who previously had no outlet to share opinions regarding the national healthcare system; however, this exercise will only have utility if the government implements operational and policy changes based on citizens' feedback. Additional evaluation efforts should be conducted to determine how or if HSS data impacts government planning and allocation for healthcare services.

Overall, universal healthcare programs show promise for increasing equity in access to healthcare. Brunei does have many advantages, however, such as high GDP that have

accelerated its success. Other Southeast Asian nations will face greater challenges ensuring adequate resources to fund healthcare services and reach vulnerable populations. Findings of the HSS do indicate that well-funded universal healthcare can reduce significant utilization disparities. Substantial financial resources do not, however, guarantee equity among rural and minority populations and universal healthcare efforts should incorporate measures to understand and address barriers to healthcare among these groups.

Author Acknowledgments

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Appendix. Survey Instrument

KAJISELIDIK SISTEM KESIHATAN NEGARA BRUNEI DARUSSALAM
HEALTH SYSTEM SURVEY, NEGARA BRUNEI DARUSSALAM
2013

KERTAS KAWALAN / CONTROL SHEET
Untuk Diisikan Oleh Penemuduga / To Be Completed By Interviewer

A. Arahtuju Perumahan / Household Location

Alamat / Address	
Jalan / Street	
Kampong / Village	
Daerah / District	

B. Nombor ID / Identification Numbers

ID Perumahan / Household ID			ID Penemuduga Interviewer ID	

C. Usaha ke Perumahan / Household Attempts

	Tarikh (HH/BB) / Date (DD/MM)	**Jam/ Time**	**Kod/ Code***	**Nota/ Notes**
#1				
#2				
#3				
Lain-lain/ Other				

***Kod / Codes:**

1: Diisikan oleh penemuduga / Completed by interviewer
2: Diisikan oleh responden / Completed by respondent
(ditinggalkan di rumah) / (left at household)
3: Tiada orang di rumah / No one at home
4: Perjanjian dibuat / Appointment made
5: Ditolak / Refused
6: Perumahan tidak dijumpai / Household not found
7: Penghuni rumah tidak berbahasa Melayu/Inggeris
Household cannot speak Malay/English
8: Lain-lain / Other

D. Untuk Kegunaan Penyelia Sahaja / For Supervisor Use Only

	Selesai / Completed	**Tarikh (HH/BB) / Date (DD/MM)**	**ID Penyelia / Supervisor ID**
Pemerhatian penyelia/ Supervisor observation	1 ❑ Ya / Yes 2 ❑ Tidak / No		
Pemeriksaan semula / Back check	1 ❑ Ya / Yes 2 ❑ Tidak / No		

E. Untuk Kegunaan Kemasukan Data Sahaja / For Data Entry Use Only

	Selesai / Completed	**Tarikh (HH/BB) / Date (DD/MM)**	**ID Penyelia / Supervisor ID**
Data dimasukkan / Data entered	1 ❑ Ya / Yes 2 ❑ Tidak / No		
Kemasukan data kedua / Double entry	1 ❑ Ya / Yes 2 ❑ Tidak / No		

BORANG IZIN / PERSETUJUAN
KAJISELIDIK SISTEM KESIHATAN NEGARA BRUNEI DARUSSALAM

Rumah awda telah terpilih secara kebetulan untuk mengambil bahagian dalam kajian ini yang dinamakan Kajiselidik Sistem Kesihatan Negara Brunei Darussalam (HSS) 2013. Sebelum awda membuat keputusan untuk ikut serta, saya akan menerangkan terlebih dahulu mengenai kajian ini. Sila tanya saya jika ada apa-apa yang awda tidak faham. Kajian ini dijalankan oleh Pusat Kajian Strategi dan Dasar (CSPS), sebuah pusat kajiselidik di Negara Brunei Darussalam dengan kerjasama RTI International, sebuah organisasi kajiselidik di Amerika Syarikat. Kajian ini dibiayai oleh Kementerian Kesihatan.

Tujuan kajiselidik ini ialah untuk memahami pengetahuan dan sikap penduduk di negara ini mengenai penjagaan kesihatan. Kementerian Kesihatan akan menggunakan maklumat daripada kajian ini untuk mempertingkatkan akses dan kualiti penjagaan kesihatan di Negara Brunei Darussalam. Di antara soalan-soalan kajiselidik termasuklah kekerapan awda berjumpa doktor dan doktor gigi, harapan awda dari sistem kesihatan dan bagaimana awda menjaga kesihatan awda. Awda adalah di antara 1,550 peserta yang akan kami temuduga dalam kajian ini yang hanya akan mengambil masa kira-kira 30 minit.

Maklumat peribadi seperti nama dan nombor kad pengenalan awda tidak akan dicatat. Semua jawapan awda adalah maklumat sulit. Penyertaan awda adalah secara sukarela. Awda boleh berhenti jika perlu atau memilih untuk tidak menjawab soalan. Kajiselidik ini tidak akan mendatangkan risiko kepada awda. Ianya akan memberikan faedah secara tidak langsung kepada awda. Sebagai penghargaan, kami akan memberi cenderahati atas kerjasama awda.

Jika ada sebarang pertanyaan mengenai kajiselidik ini, sila hubungi pegawai-pegawai berikut dari Kementerian Kesihatan di talian:

PD Masjidah binti Pg Haji Tengah Omar:	8731005
Hajah Masni binti Haji Ibrahim:	8739771
Hajah Naedawati binti Haji Morsidi:	8732077
Jeffry bin Haji Awang Damit:	8712853
Dk Hajah Tuty Shahrina binti Pg Haji Mat Said:	8815270

Jika awda ada sebarang pertanyaan mengenai cara kutipan data, sila hubungi Razalli bin Hj Jamil di Pusat Kajian Strategi dan Dasar (CSPS) di talian 2445841 sambungan 1507.

Adakah awda mempunyai apa-apa soalan tentang apa yang telah saya terangkan? [JAWAB JIKA ADA]
Boleh kita mulakan kajiselidik ini?

Jika TIDAK: TEMUDUGA TAMAT
Jika YA: PENEMUDUGA MENANDATANGANI DI BAWAH.

Saya mengaku sifat, tujuan, kemungkinan faedah dan risiko dari ikut serta dalam kajiselidik ini telah diterangkan kepada responden.

_____	_____	_____	_____
Tarikh	Tandatangan Penemuduga	Nama Penemuduga (Cetak)	Nombor ID

INFORMED CONSENT
BRUNEI DARUSSALAM HEALTH SYSTEM SURVEY (HSS)

Your household has been randomly selected to participate in a survey called the Brunei Darussalam Health Systems Survey (HSS) 2013. Before you decide if you want to take part, I would like to tell you about the survey. Please ask me to explain anything you do not understand. This study is being conducted by the Centre for Strategic and Policy Studies (CSPS), a research organization based in Brunei Darussalam and RTI International, a research organization in the USA. The Ministry of Health Brunei Darussalam is funding this research.

The purpose of this study is to understand your knowledge and behaviors about healthcare. The Ministry of Health will use this information to improve healthcare access and quality in Brunei Darussalam. The survey asks questions such as how often you go to doctors and dentists, what you expect from the healthcare system, and how you take care of your health. You are one of among 1,550 people that we are interviewing. The survey takes about 30 minutes to complete.

Personal information such as your name or IC number will not be written down. Your answers are confidential. This research is voluntary. You can stop at any time and you may choose not to answer some questions. There is neither a risk nor direct benefits to you. I'll give you a gift as a token of appreciation after the interview.

If you have any questions about the survey, please contact the Ministry of Health at one of these telephone numbers:

PD Masjidah binti Pg Haji Tengah Omar:	8731005
Hajah Masni binti Haji Ibrahim:	8739771
Hajah Naedawati binti Haji Morsidi:	8732077
Jeffry bin Haji Awang Damit:	8712853
Dk Hajah Tuty Shahrina binti Pg Haji Mat Said:	8815270

If you have any questions about how the data are collected, please contact Razalli bin Hj Jamil at the Centre for Strategic and Policy Studies, telephone number 2445841 ext 1507.

Do you have any questions about what I just told you? [ANSWER ANY QUESTIONS.]
Can we start the interview now?

IF NO: END INTERVIEW
IF YES: INTERVIEWER SIGNS BELOW.

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the respondent.

Date	Signature of Interviewer	Printed Name of Interviewer	ID number

MASA BERMULA / TIME START: ___ __: ___ ___ AM / PM

CATAT MASA / ENTER TIME BULATKAN / CIRCLE

	BAHAGIAN # 1 LATARBELAKANG RESPONDEN	SECTION #1 RESPONDENT BACKGROUND
1	Berapakah umur awda (tahun)? 1❑ 18-29 3❑ 40-59 2❑ 30-39 4❑ 60 + -8❑ DK -9❑ RF	What is your age (in years)?
2	Agama 1❑ Islam / Islam 2❑ Buddha / Buddhist 3❑ Kristian / Christian 4❑ Lain-lain / Others -8❑ DK -9❑ RF	Religion
3	Apakah taraf kerakyatan awda? 1❑ Rakyat Brunei / Brunei citizen 2❑ Penduduk tetap / Permanent resident 3❑ Penduduk sementara / Temporary resident 4❑ Lain-lain / Others -8❑ DK -9❑ RF	What is your citizenship?
4	Bangsa 1❑ Melayu Brunei (Brunei, Tutong, Belait) / Brunei Malay 2❑ Melayu Brunei lainnya (Dusun, Bisaya, Murut, Kedayan) / Other Brunei Malay 3❑ Puak asli lain / Other indigenous (Iban, Punan, Kelabit) 4❑ Cina / Chinese 5❑ Lain-lain / Others -8❑ DK -9❑ RF	Race
5	Apakah status perkahwinan awda? 1❑ Kahwin / Married 2❑ Cerai / Divorced 3❑ Duda, Balu / Widowed 4❑ Bujang / Never married -8❑ DK -9❑ RF	What is your marital status?

6	Apakah status pekerjaan awda? 1❑ Bekerja, Kerajaan / Employed, Government 2❑ Bekerja, Sektor Swasta / Employed, Private Sector 3❑ Bekerja sendiri / Self-employed 4❑ Bersara / Retired 5❑ Tidak bekerja / Not employed -8❑ DK -9❑ RF	What is your employment status?
7	Apakah tahap pendidikan tertinggi yang awda telah selesaikan? 1❑ Universiti / University 2❑ HND / A level 3❑ ONC, Sekolah Vokasional / ONC, vocational school 4❑ Sekolah Menengah Atas atau Bawah / Lower or upper secondary school 5❑ Sekolah Rendah / Primary school 6❑ Tidak ada pendidikan rasmi / No formal education -8❑ DK -9❑ RF	What is the highest educational level you have completed?
8	Berapakah jumlah pendapatan kesemua ahli rumah awda dalam sebulan? Termasuk pendapatan dari semua sumber seperti pencen dan bantuan Kerajaan. 1❑ Kurang dari $1,000 / Less than $1,000 2❑ $1,000 - $1,999 3❑ $2,000 - $3,999 4❑ $4,000 atau lebih / $4,000 or more -8❑ DK -9❑ RF	What is the total combined income of everyone in the household per month? Please include income from all sources, including pensions and government assistance.
9	Termasuk awda dan pembantu rumah, berapa orang yang tinggal di dalam rumah ini yang … a. Berumur 17 dan ke bawah? / Age 17 and under? ___ ___ b. Berumur 18-54 tahun? / Age 18-54? ___ ___ c. Berumur 55 tahun dan lebih? / Age 55 and above? ___ ___	Including yourself and any domestic helpers, how many people living in this household are …

BAHAGIAN #2 PENGGUNAAN SISTEM KESIHATAN KERAJAAN	SECTION #2 GOVERNMENT HEALTH SYSTEM UTILIZATION
Dalam bahagian ini, saya akan menanyakan awda mengenai hospital kerajaan dan klinik/ pusat-pusat kesihatan Kerajaan. Terdapat empat buah hospital Kerajaan iaitu RIPAS, PMMPMHAB Tutong, SSB Belait, dan PIHM Temburong. Klinik dan pusat kesihatan adalah lebih kecil daripada hospital.	In this section, I'll ask about government hospitals and clinics /centres. There are four hospitals- RIPAS, PMMPMHAB Tutong, SSB Belait, and PIHM Temburong. Clinics and centres are smaller than hospitals.

10	Dalam tempoh masa 6 bulan yang lalu, berapa kalikah awda telah mendapatkan rawatan perubatan di tempat-tempat berikut? Tidak termasuk rawatan gigi.	In the past 6 months, how many times did you receive medical care at the following places? Please do not include dental care.

	0	1	2-3	4-7	8-11	12+	DK	RF
a. Hospital kerajaan / Government hospital	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
b. Klinik atau pusat kesihatan kerajaan / Government health clinics or centres	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
c. Lawatan ke rumah oleh pekerja kesihatan kerajaan / Home visit by government health worker	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
d. Lain-lain seperti perkhidmatan kesihatan sekolah, klinik bergerak, klinik udara / Other, such as school health service, mobile clinics, flying clinics	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑

11	Dalam tempoh masa 6 bulan yang lalu, berapa kalikah ahli lain dalam rumah awda telah mendapatkan rawatan di tempat-tempat berikut? Tidak termasuk rawatan gigi.	In the past 6 months, how many times did other members of your household receive medical care at the following places? Please do not include dental care.

	0	1	2-3	4-7	8-11	12+	DK	RF
a. Hospital kerajaan / Government hospital	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
b. Klinik atau pusat kesihatan kerajaan / Government health clinics or centres	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
c. Lawatan ke rumah oleh pekerja kesihatan kerajaan / Home visit by government health worker	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
d. Lain-lain seperti perkhidmatan kesihatan sekolah, klinik bergerak, klinik udara / Other, such as school health service, mobile clinics, flying clinics	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑

12	Secara amnya, sejauh manakah awda berpuas hati dengan hospital-hospital kerajaan? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak berpuas hati" dan 5 "Sangat berpuas hati."	In general, how satisfied or dissatisfied are you with government hospitals? Please use a scale from 1 to 5, where 1 is "Very Dissatisfied" and 5 is "Very Satisfied."

	1 Sangat tidak berpuas hati / Very dissatisfied	2	3	4	5 Sangat berpuas hati / Very satisfied	DK	RF	NA
a. Kualiti rawatan / Quality of treatment	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
b. Masa menunggu / Wait times	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
c. Jarak dari rumah / Distance from home	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
d. Waktu dibuka / Opening hours	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
e. Doktor / Doctors	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
f. Jururawat / Nurses	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
g. Kemudahan / Facilities	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑

13	Sejauh manakah awda berpuas hati dengan klinik atau pusat-pusat kesihatan kerajaan? Tidak termasuk hospital. Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak berpuas hati" dan 5 "Sangat berpuas hati."	How satisfied or dissatisfied are you with government health clinics or centres? Please do not include hospitals. Please use a scale from 1 to 5, where 1 is "Very Dissatisfied" and 5 is "Very Satisfied."

	1 Sangat tidak berpuas hati / Very dissatisfied	2	3	4	5 Sangat berpuas hati / Very satisfied	DK	RF	NA
a. Kualiti rawatan / Quality of treatment	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
b. Masa menunggu / Wait times	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
c. Jarak dari rumah / Distance from home	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
d. Waktu dibuka / Opening hours	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
e. Doktor / Doctors	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
f. Jururawat / Nurses	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
g. Kemudahan / Facilities	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑

BAHAGIAN #3 PENGGUNAAN SISTEM KESIHATAN SWASTA		SECTION #3 PRIVATE HEALTH SYSTEM UTILIZATION							
14	Dalam tempoh masa 6 bulan yang lalu, berapa kalikah awda dan ahli dalam rumah awda mendapatkan rawatan perubatan di tempat-tempat berikut? Tidak termasuk rawatan gigi atau perubatan alternatif.	In the past 6 months, how many times did you and members of your household receive medical care at the following places? Please do not include dental care or alternative medical care.							
		0	1	2-3	4-7	8-11	12+	DK	RF
a.	Jerudong Park Medical Centre Hospital (JPMC)	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
b.	JIKA SOALAN 14A LEBIH DARI "0," TANYA SOALAN 14B: Berapa banyak dari lawatan-lawatan ke JPMC itu adalah kerana rujukan dari doktor kerajaan? / IF QUESTION 14A IS MORE THAN "0," ASK QUESTION 14B: How many of these visits to JPMC were referrals from a government doctor?	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
c.	Klinik atau doktor swasta di Brunei Darussalam / Private clinic or doctor in Brunei Darussalam	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
d.	Penjagaan kesihatan swasta luar negeri / Private healthcare provider abroad	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑

JIKA SOALAN 14A, 14C, 14D KESEMUANYA ADALAH "0" → SILA TERUS KE SOALAN 17 / IF QUESTIONS 14A, 14C, 14D ARE ALL "0" → GO TO QUESTION 17.

15	Dalam tempoh masa 6 bulan yang lalu, kira-kira berapa banyak jumlah wang kesemua ahli dalam rumah awda digunakan untuk membayar rawatan perubatan swasta? Tidak termasuk sumbangan dari majikan, jika ada. Tidak termasuk rawatan gigi.	In the past 6 months, about how much money did everyone in your household spend for private medical care? Please do not include any contribution from employers, if any. Please do not include dental care.

1❑ $0
2❑ $1-$49
3❑ $50-$149
4❑ $150-$499
5❑ $500-$1,999
6❑ $2,000-$4,999
7❑ $5,000 or more
-8❑ DK -9❑ RF

16	Dalam tempoh masa 6 bulan yang lalu – Fikirkan sebab-sebab awda dan ahli dalam rumah awda mendapatkan rawatan swasta (bukan kerajaan.) Adakah kerana klinik / hospital swasta (bukan kerajaan) itu ...	Please think about why you and members of your household used private medical care in the past 6 months. Did you use private medical care because it…			
		Tidak / No	**Ya / Yes**	**DK**	**RF**
a. Memberikan ubat-ubatan yang lebih baik? / Has better medications?		1❑	2❑	-8❑	-9❑
b. Ada doktor yang sama setiap kali awda ke sana? / Has the same doctor every time you go there?		1❑	2❑	-8❑	-9❑
c. Mempunyai masa menunggu yang lebih pendek? / Has shorter wait times?		1❑	2❑	-8❑	-9❑
d. Mempunyai waktu buka yang lebih panjang? / Has longer opening hours?		1❑	2❑	-8❑	-9❑
e. Mempunyai doktor dan jururawat yang memberikan rawatan yang lebih baik? / Has doctors and nurses that provide better treatment?		1❑	2❑	-8❑	-9❑
f. Mempunyai doktor dan jururawat yang berkomunikasi dengan lebih baik? / Has doctors and nurses who communicate better?		1❑	2❑	-8❑	-9❑
g. Mempunyai kemudahan yang lebih baik? / Has better facilities?		1❑	2❑	-8❑	-9❑
i. Lebih dekat dari rumah awda? / Is closer to your home?		1❑	2❑	-8❑	-9❑
h. Lain-lain (nyatakan)? / Other (specify)?		1❑	2❑	-8❑	-9❑

17	(SOAL SEMUA RESPONDEN): Bayangkan jika penduduk dikehendaki untuk membiayai rawatan perubatan. Adakah awda sanggup untuk membayar rawatan yang berkualiti tinggi dan mudah didapati di…	(ASK ALL RESPONDENTS): Imagine that people were asked to pay more for medical care. Are you willing to pay for high-quality and accessible medical care at …

	Tidak / No	Ya / Yes	DK	RF
a. Hospital kerajaan? / Government hospitals?	1❑	2❑	-8❑	-9❑
b. Klinik atau pusat kesihatan kerajaan? / Government health clinics or centres?	1❑	2❑	-8❑	-9❑
c. Hospital swasta (JPMC)? / Private hospitals (JPMC)?	1❑	2❑	-8❑	-9❑
d. Klinik atau pusat kesihatan swasta di Brunei Darussalam? / Private health clinics or centres in Brunei Darussalam?	1❑	2❑	-8❑	-9❑
e. Hospital atau klinik swasta di luar negeri? / Private hospitals or clinics abroad?	1❑	2❑	-8❑	-9❑

BAHAGIAN #4 RAWATAN GIGI	SECTION #4 DENTAL CARE

18	Dalam tempoh masa 12 bulan yang lalu, pernahkah awda menerima rawatan gigi dari ….	In the past 12 months, have you received dental care from a …

	Tidak / No	Ya / Yes	DK	RF
a. Doktor gigi Kerajaan? / Government dentist?	1❑	2❑	-8❑	-9❑
b. Doktor gigi swasta? / Private dentist?	1❑	2❑	-8❑	-9❑

19	Sejauh manakah awda berpuas hati dengan rawatan gigi dari tempat-tempat berikut? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak berpuas hati" dan 5 "Sangat berpuas hati."	How satisfied or dissatisfied are you with dental care from the following sources? Please use a scale from 1 to 5, where 1 is "Very Dissatisfied" and 5 is "Very Satisfied."

	1 Sangat tidak berpuas hati / Very dissatisfied	2	3	4	5 Sangat berpuas hati / Very satisfied	DK	RF	NA
a. Doktor gigi Kerajaan / Government dentist	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
b. Doktor gigi swasta / Private dentist	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑

20	Setakat manakah awda berpuas hati dengan aspek-aspek rawatan gigi dari doktor Kerajaan berikut? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak berpuas hati" dan 5 "Sangat berpuas hati."	How satisfied or dissatisfied are you with the following aspects of government dental care? Please use a scale from 1 to 5, where 1 is "Very Dissatisfied" and 5 is "Very Satisfied."

	1 Sangat tidak berpuas hati / Very dissatisfied	2	3	4	5 Sangat berpuas hati / Very satisfied	DK	RF	NA
a. Kualiti Rawatan / Quality of treatment	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
b. Masa Menunggu / Wait times	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
c. Jarak dari rumah / Distance	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
d. Waktu Dibuka / Opening hours	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
e. Doktor gigi / Dentists	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑
f. Kemudahan / Facilities	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑	-7❑

21	Adakah awda sanggup membayar rawatan pergigian yang berkualiti tinggi dan mudah didapati dari…	Are you willing to pay for high-quality and accessible dental care from …

	Tidak / No	Ya / Yes	DK	RF
a. Doktor gigi Kerajaan? / Government dentist?	1❑	2❑	-8❑	-9❑
b. Doktor gigi swasta? / Private dentist?	1❑	2❑	-8❑	-9❑

BAHAGIAN #5
PENJAGAAN PERUBATAN ALTERNATIF

SECTION #5
ALTERNATIVE MEDICAL CARE

22	Dalam tempoh masa 6 bulan yang lalu, berapa kalikah awda dan ahli dalam rumah awda mendapatkan rawatan dari…	In the past 6 months, how many times have you and members of your household received medical care from …

	0	1	2-3	4-7	8-11	12+	DK	RF
a. Perubatan Islam / Islamic healer	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
b. Rawatan Kampong seperti dukun/ Kampong treatment such as dukun	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
c. Perubatan tradisional Cina / Chinese traditional healer	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑
d. Lain-lain / Other	1❑	2❑	3❑	4❑	5❑	6❑	-8❑	-9❑

23	Saya ingin mendapatkan pendapat awda mengenai perubatan alternatif. Sejauh manakah awda bersetuju dengan kenyataan berikut? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak bersetuju" dan 5 "Sangat bersetuju."	I would like to ask your opinion about alternative medicines. How much do you agree or disagree with the following statements? Please use a scale from 1 to 5, where 1 is "Completely Disagree" and 5 is "Completely Agree."

	1 Sangat tidak bersetuju / Completely Disagree	2	3	4	5 Sangat bersetuju / Completely Agree	DK	RF
a. Rawatan dari perubatan alternatif adalah berkesan untuk masalah kesihatan fizikal / Alternative medicine has effective treatments for physical health problems	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
b. Rawatan dari perubatan alternatif adalah berkesan untuk masalah kesihatan mental / Alternative medicine has effective treatments for mental health problems	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
c. Perawat alternatif memberi lebih perhatian kepada pesakit berbanding kan dengan doktor dan jururawat moden / Alternative healers pay more attention to patients than modern doctors or nurses do	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑

BAHAGIAN #6 STATUS KESIHATAN	SECTION #6 HEALTH STATUS

24	Secara umumnya, tahap kesihatan awda adalah … In general, is your health …
	1❑ Cemerlang / Excellent? 2❑ Sangat baik? / Very good? 3❑ Baik? / Good? 4❑ Sederhana? / Fair? 5❑ Kurang baik? / Poor? -8❑ DK -9❑ RF

25	Berapa hari dalam 7 hari yang lalu awda melakukan kegiatan aktiviti fizikal yang intensif atau sederhana? Contohnya - berlari, berjalan pantas, atau kelas senaman.	During the past 7 days, on how many days did you do vigorous or moderate physical activities? Examples of these activities are running, brisk walking, or exercise class.
	_ _ hari / days (0-7) -8❑ DK -9❑ RF	
26	Adakah awda sekarang menghisap atau menggunakan apa jua jenis produk tembakau seperti rokok, cerut, atau paip?	Do you currently smoke or chew any tobacco products such as cigarettes, cigars, or pipes?
	1❑ Tidak / No 2❑ Ya, setiap hari / Yes, daily 3❑ Ya, tidak setiap hari / Yes, less than daily -8❑ DK -9❑ RF	
27	Ingati kembali apa yang awda makan dan minum kelmarin. Berapa banyak hidangan berikut awda telah makan / minum kelmarin?	Think about all the food and beverages you had yesterday. How many servings did you have of … yesterday?

	Nombor / Number
a. Kuih Melayu (bingka, kusui, or seri muka) / Malay cakes (bingka, kusui, or seri muka)	
b. Makanan bergoreng seperti ayam goreng, kentang goreng, ikan goreng / Fried food such as fried chicken, chips, or fried fish	
c. Keropok atau makanan segera seperti pizza atau burger / Crisps or other fast food such as pizza or burgers	
d. Buah-buahan (1 hidangan = 1 buah sederhana, 2 buah kecil, 1 cawan buah berpotongan) / Fruits (1 serving is 1 medium piece, 2 small pieces, 1 cup diced pieces)	
e. Sayur-sayuran (1 hidangan = ½ cawan or 1 cawan ulam-ulaman / salad) / Vegetables (1 serving is ½ cup or 1 cup of salad vegetables)	
f. Mee segera / Instant noodles	
g. Minuman ringan, minuman bergas, atau kordial / Soft drinks, fizzy drinks, or cordials	

28	Dalam tempoh masa 2 minggu yang lalu, berapa kerap awda rasa terganggu oleh hal-hal berikut?	Over the last 2 weeks, how often have you been bothered by the following problems?				
	Tiada langsung / Not at all	**Beberapa hari / A few days**	**Lebih dari seminggu / More than half the days**	**Hampir setiap hari / Nearly every day**	**DK**	**RF**
a. Rasa gementar atau "kabak-kabak," gelisah, atau resah / Feeling nervous, anxious, or on edge	1❑	2❑	3❑	4❑	-8❑	-9❑
b. Tidak dapat menghentikan atau mengawal rasa bimbang / Not being able to stop or control worrying	1❑	2❑	3❑	4❑	-8❑	-9❑
c. Kurang berminat atau kurang seronok dalam membuat apa jua perkara / Little interest or pleasure in doing things	1❑	2❑	3❑	4❑	-8❑	-9❑
d. Rasa sedih, murung, atau tiada harapan / Feeling down, depressed, or hopeless	1❑	2❑	3❑	4❑	-8❑	-9❑

29	Berapa kali biasanya awda mencuci tangan dalam sehari? Tidak termasuk berwudhu.	How many times do you usually wash your hands in a day? Please do not include "wudhu."
	1❑ Tiada / None 2❑ 1-2 3❑ 3-4 4❑ 5-6 5❑ 7-9 6❑ 10 atau lebih / or more -8❑ DK -9❑ RF	

BAHAGIAN #7 PERANAN MASYARAKAT		SECTION #7 THE PUBLIC'S ROLE			
30	Dalam tempoh masa 6 bulan lalu, awda mempelajari maklumat kesihatan dari…	In the past 6 months, have you learned about health from …			
		Tidak / No	Ya / Yes	DK	RF
a. Surat khabar, radio, atau televisyen? / The newspaper, radio, or television?		1❑	2❑	-8❑	-9❑
b. Risalah, brosur, atau persuratan? / Pamphlets, brochures, or mailings?		1❑	2❑	-8❑	-9❑
c. Internet - Kementerian Kesihatan? / Internet - Government Ministry of Health?		1❑	2❑	-8❑	-9❑
d. Internet – sumber lain? / Internet – other sources?		1❑	2❑	-8❑	-9❑
e. Telefon, SMS, Whatsapp? / Telephones, SMS, Whatsapp?		1❑	2❑	-8❑	-9❑
f. Papan iklan? / Billboards?		1❑	2❑	-8❑	-9❑
g. Kawan atau keluarga? / Friends or family?		1❑	2❑	-8❑	-9❑
h. Doktor, jururawat, dan pekerja kesihatan lain-lain / Doctors, nurses, and other health workers		1❑	2❑	-8❑	-9❑
31	Apakah jenis maklumat kesihatan yang awda berminat untuk mengetahui dengan lebih lanjut?	What types of health information would you be interested in learning more about?			
		Tidak / No	Ya / Yes	DK	RF
a. Rawatan penyakit / Treatments for diseases		1❑	2❑	-8❑	-9❑
b. Tanda-tanda dan simptom-simptom penyakit / Signs and symptoms of diseases		1❑	2❑	-8❑	-9❑
c. Permakanan dan mengurangkan berat badan / Nutrition and weight loss		1❑	2❑	-8❑	-9❑
d. Tekanan dan kesihatan mental / Stress and mental health		1❑	2❑	-8❑	-9❑
e. Kegiatan fizikal / Physical activity		1❑	2❑	-8❑	-9❑

32	Kementerian Kesihatan mengadakan aktiviti-aktiviti promosi kesihatan awam. Apakah jenis-jenis aktiviti yang awda berminat untuk ikut serta?	The Ministry of Health conducts activities to promote the public's health. What types of activities are you interested in?

	Tidak / No	Ya / Yes	DK	RF
a. Pemeriksaan kesihatan seperti tekanan darah tinggi, kolesterol / Screenings for health problems such as high-blood pressure, cholesterol	1❑	2❑	-8❑	-9❑
b. Kaunseling kesihatan awda dan keluarga awda / Counseling about you and your family's health	1❑	2❑	-8❑	-9❑
c. Sesi pendidikan kesihatan oleh pakar-pakar tentang cara menjaga kesihatan awda dan keluarga awda / Education sessions by experts about how to keep you and your family healthy	1❑	2❑	-8❑	.9❑
d. Aktiviti-aktiviti fizikal seperti 'walk-a-thon' dan kelas senaman / Physical activities such as walk-a-thons and exercise classes	1❑	2❑	-8❑	-9❑

33	Sejauh manakah awda bersetuju dengan kenyataan berikut? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak bersetuju" dan 5 "Sangat bersetuju."	How much do you agree or disagree with the following statements? Please use a scale from 1 to 5, where 1 is "Completely Disagree" and 5 is "Completely Agree."

	1 Sangat tidak bersetuju / Completely Disagree	2	3	4	5 Sangat bersetuju / Completely Agree	DK	RF
a. Awda cuba mengambil tindakan untuk mencegah masalah kesihatan / You try to take action to prevent health problems	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
b. Awda lebih rela untuk menikmati kehidupan daripada memikirkan tentang masalah kesihatan / You would rather enjoy life than worry about health problems	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
c. Awda sanggup untuk mengelakkan makanan kurang sihat demi mengekalkan kesihatan awda / You are willing to avoid unhealthy foods to maintain your health	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑

34	Sejauh manakah awda bersetuju dengan kenyataan berikut? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak bersetuju" dan 5 "Sangat bersetuju."	How much do you agree or disagree with the following statements? Please use a scale from 1 to 5, where 1 is "Completely Disagree" and 5 is "Completely Agree."

	1 Sangat tidak bersetuju / Completely Disagree	2	3	4	5 Sangat bersetuju / Completely Agree	DK	RF
a. Kesihatan awda adalah dalam kawalan awda / You are in control of your health	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
b. Kerap berhubung dengan doktor atau jururawat adalah cara terbaik untuk mengelakkan penyakit / Having regular contact with your doctor or nurse is the best way for you to avoid illness	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
c. Awda akan kekal sihat jika bertindak dengan betul / If you take the right actions, you can stay healthy	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
d. Doktor dan jururawat mengawal kesihatan awda / Doctors and nurses control your health	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
e. Setiap kali awda pulih dari penyakit, ia biasanya kerana pemedulian yang baik dari doktor dan jururawat / Whenever you recover from an illness, it is usually because doctors and nurses have been taking good care of you	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
f. Jika awda jatuh sakit, tabiat awdalah yang menentukan secepat mana awda akan sembuh / If you get sick, it is your own behavior which determines how soon you get well again	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑

35	Ingatkan kembali ketika doktor telah merawat awda untuk masalah kesihatan dalam tempoh masa 6 bulan yang lalu. Adakah awda…	Think about the times when a doctor has treated you for a health problem in the past 6 months. Did you…

	Tidak/ No	Ya/ Yes	DK	RF	NA
a. Memakan semua ubat mengikut seperti mana yang telah diarahkan oleh doctor? / Take all your medication as prescribed by your doctor?	1❑	2❑	-8❑	-9❑	-7❑
b. Menghadiri rawatan susulan? / Attend all your follow-up visits?	1❑	2❑	-8❑	-9❑	-7❑

36	Adakah awda atau ahli dalam rumah awda pada masa ini mempunyai perlindungan insuran perubatan swasta yang dibeli sendiri oleh ahli rumah awda? Tidak termasuk perlindungan insuran oleh majikan.	Are you or any members of your household currently covered with private medical insurance that your household has purchased? Do not include insurance provided by an employer.
	1❑ Tidak / No 2❑ Ya / Yes -8❑ DK -9❑ RF	

MASA BERAKHIR / TIME END: __ __: __ __ AM / PM

CATAT MASA / ENTER TIME BULATKAN / CIRCLE

BAHAGIAN #8 PEMERHATIAAN RESPONDEN		SECTION #8 RESPONDENT OBSERVATIONS
1	Berapa banyak kajiselidik yang pernah awda ikuti, termasuk yang ini? _____ Masukkan bilangan / Enter number	Including this survey, how many surveys have you ever taken?
2	Sejauh manakah awda bersetuju dengan kenyataan berikut mengenai kajiselidik? Sila berikan markah mengikut skala 1-5, 1 "Sangat tidak bersetuju" dan 5 "Sangat bersetuju."	How much do you agree or disagree with the following statements about surveys? Please use a scale from 1 to 5, where 1 is "Completely Disagree" and 5 is "Completely Agree."

	1 Sangat tidak bersetuju / Completely Disagree	2	3	4	5 Sangat bersetuju / Completely Agree	DK	RF
a. Menyertai kajiselidik adalah menarik / Participating in surveys can be interesting	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
b. Kajiselidik seperti ini menghasilkan keputusan yang dipercayai / This type of research produces reliable results	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
c. Kajiselidik adalah berfaedah untuk mengumpul maklumat / Surveys are useful ways to gather information	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
d. Sebahagian soalan dalam kajiselidik adalah sangat susah / The questions in some surveys are too difficult	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑
e. Kajiselidik menanyakan soalan-soalan yang terlalu peribadi / Surveys ask questions that are too personal	1❑	2❑	3❑	4❑	5❑	-8❑	-9❑

3	Sejauh manakah awda ingin menyertai kajiselidik seperti ini di masa-masa akan datang?	How much would you like to participate in similar surveys in the future?
	1❑ Banyak / A lot 2❑ Sedikit / A little 3❑ Langsung tidak / Not at all	

	BAHAGIAN #9 PEMERHATIAAN PENEMUDUGA	SECTION #9 INTERVIEWER OBSERVATIONS
1	Bahasa temuduga	Language of interview
	1❑ Melayu sahaja / Malay only 2❑ Inggeris sahaja / English only 3❑ Kedua-dua Melayu dan Inggeris / Both Malay and English	
2	Jantina Responden	Respondents' Gender
	1❑ Lelaki / Male 2❑ Perempuan / Female	
3	Adakah mudah atau susah bagi responden untuk menjawab soalan-soalan ini?	How easy or difficult was it for the respondent to answer the questions?
	1❑ Sangat mudah / Very easy 2❑ Agak mudah / Somewhat easy 3❑ Agak susah / Somewhat difficult 4❑ Sangat susah / Very difficult	
4	Sejauh manakah responden berminat terhadap kajiselidik ini?	How interested or uninterested was the respondent in the survey?
	1❑ Sangat berminat / Very interested 2❑ Agak berminat / Somewhat interested 3❑ Agak tidak berminat / Somewhat uninterested 4❑ Sangat tidak berminat / Very uninterested	
5	Apakah interaksi peribadi awda dengan responden?	How good or bad was your personal interaction with the respondent?
	1❑ Sangat baik / Very good 2❑ Agak baik / Somewhat good 3❑ Agak buruk / Somewhat bad 4❑ Sangat buruk / Very bad	
6	Ketika mula-mula berjumpa dengan responden, sejauh manakah responden bersetuju untuk ikut serta dalam kajiselidik ini?	When you first approached the respondent, how agreeable was he or she to participating in the survey?
	1❑ Sangat bersetuju / Very agreeable 2❑ Agak bersetuju / Somewhat agreeable 3❑ Tidak bersetuju / Not at all agreeable	

7	Adakah ahli-ahli berikut hadir semasa temuduga ini?	Were any of the following people present during the interview?	
		Tidak / No	Ya / Yes
a. Pasangan responden / Respondent's spouse		1❑	2❑
b. Anak-anak responden / Respondent's children		1❑	2❑
c. Ibu-bapa responden / Respondent's parents		1❑	2❑
d. Ahli keluarga responden yang lain / Other family member of the respondent		1❑	2❑
e. Lain-lain yang bukan ahli keluarga responden / Other non-family member		1❑	2❑

8	Bagi berapa banyak soalan responden dibantu oleh orang lain, seperti mencadangkan jawapan atau memberitahu fakta?	For how many questions did someone else help the respondent, such as by suggesting answers or providing facts?
	1❑ 0 2❑ 1 soalan/ 1 question 3❑ 2-3 soalan / 2-3 questions 4❑ 4-5 soalan / 4-5 questions 5❑ 6 atau lebih soalan / 6 or more questions	

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