



INDEPTH Training and Research
Centres of Excellence (INTREC)



Indonesia Country Report

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The INTREC Indonesia Country Report

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1. Executive Summary

Introduction

The WHO's Commission on Social Determinants of Health was concerned with the dramatic inequalities in health status that exist between and within countries. With limited awareness of social determinants of health (SDH) among decision makers, and a general global culture that under-utilises evidence within the policy process, there is an urgent need for capacity-building activities to promote informed decision-making that aims at reducing health inequities. INTREC (INDEPTH Training and Research Centres of Excellence) was established with precisely this concern in mind. INTREC's two main aims are (i) providing SDH-related training for INDEPTH researchers in Africa and Asia, thereby allowing the production of evidence on associations between SDH and health outcomes; and (ii) enabling the sharing of this information through facilitating links between researchers and decision makers in these countries, and by ensuring that research findings are presented to decision makers in an actionable, policy-relevant manner.

Indonesia is a country with great disparities, geographically, demographically, and economically. The estimated 237 million people in the country live on 6,000 islands, in the midst of which are more than one hundred active volcanos. Gross Domestic Product in Indonesia is USD 2,800 per person per year, while Gross Regional Domestic Product varies within and among provinces. Indonesia runs under a presidential government with a decentralized system, in which much of the power to govern is in the hands of district/city. Therefore, the effective development and implementation of policies relies on the capabilities of those running the districts and cities.

This report constitutes the very first step in the work of INTREC in Indonesia, by providing a situation analysis, conducted by an in-country social scientist and with the support of members of the consortium, that addresses three areas of concern:

1. Current SDH-related training in Indonesia, and gaps identified, as a baseline for INTREC to build on;
2. The core SDH issues of concern in the country;
3. Ongoing SDH-related work in Indonesia, both in terms of government policies and programmes, and in terms of efforts made by non-governmental organizations.

Methods

Various methods were used to gather information for different aspects of this report. The report has been put together through conducting desk reviews as well as conducting in-depth interviews with professional stakeholders.

Relevant databases pertaining to Indonesia were identified via the internet to develop a country profile of Indonesia. Criteria for selection included the likely reliability of a given

database (e.g. WHO was considered as reliable), and the degree to which the information given was up to date.

Information on SDH-related curricula at postgraduate public health schools in Indonesia was collected through search engines on the Internet. Using the term “magister kesehatan masyarakat” (master of public health), we searched postgraduate public health schools, and explored the websites of the schools to get information on curricula that are taught in the schools. In addition to searches on the Internet, we contacted the Association of Indonesian Public Health School Institutions to get information on public health schools in Indonesia.

The literature review was conducted by searching PubMed and Google Scholar for literature published in 2005 and beyond. Regarding the SDH-related policies as well as ongoing work on SDH in Indonesia, we collected information through searching on the Internet. We could not search for key words containing SDH for getting the information because the term was still unfamiliar in Indonesia. Therefore, we searched for certain policies associated with health, such as regulations on health, regulations related to tobacco control, and policies on social security.

Interviews with several key informants at national and local levels were conducted to get a better insight of the social determinants of health issues in Indonesia. 15 interviews were conducted, face to face or through Skype, with people involved in activities related to SDH. They were categorised as decision makers, donors, NGOs, WHO, and SDH Experts.

Results

Curricular review

The curricular review showed that social determinants of health are not taught as separate subjects in either of the public health schools reviewed. However, some courses include topics related to SDH as either mandatory or optional subjects. These included, among others, “Health Policy” at the Faculty of Public Health of Universitas Indonesia in Jakarta, and “Social and Behavioral Science” in Public Health and Priority Health Problem at the Postgraduate school of Public Health Science Program of Universitas Gadjadara in Yogyakarta.

Literature review

The literature review showed how issues related to tobacco use are major SDH in the country. Indonesia does not have strict regulations regarding smoking, and, unlike many countries in the region, has not ratified the WHO’s Framework Convention on Tobacco Control. Cigarette advertising and tobacco sponsorship in sports and performing arts are prolific. Smoking is almost ubiquitous, which also results in increasing numbers of passive smokers. Smoking cessation programs are also still quite rare. Core SDH issues of concerns

in Indonesia were identified, such as low education, poor targeted government policies, poverty, and low access to health care facilities. In rural areas, many people face geographical barriers to reaching health facilities, with one of the most common barriers to health care utilization being transportation cost.

There are some promising ongoing SDH-related works ongoing in Indonesia. The most popular program is Community Health Security (“Jamkesmas”), a national program that has been implemented since 2008 as a step towards universal coverage, and which includes primary health care services for the poor, such as general medical treatment, ambulatory, immunization, family planning, medicine, and referral services. Another program aiming to empower urban and rural communities is the National Program on Community Empowerment (PNPM Mandiri). In rural areas, PNPM Mandiri aims to improve the welfare and self-reliance of poor people, whilst in urban areas PNPM Mandiri aims at creating self-reliance, including social, economic and environmental issues, as well as housing and settlement. Additionally, the Nutrition Improvement through Community Empowerment (NICE) project aims to reduce the prevalence of underweight and stunting among children less than 5 years of age, as well as to accelerate the reduction of prevalence of anemia among children under 5 and among pregnant and lactating women.

In terms of SDH-related policies, the following laws were found to be relevant: the law on health (law 36/2009), government regulation on the harm of smoking (19/2003), and other laws associated with smoking, such as broadcasting law (law 32/2002), film law (law 33/2009), and Press law (law 40/1999). There are also SDH-related policies that are expected to be reviewed in the next few months, including the law on the national social security system (law 40/2004), the law on social security administrative bodies (law 24/2011), as well as law on labor and other laws related to the implementation of universal coverage that is planned to be implemented in early 2014.

Stakeholder interviews

Interviews with key informants found that ‘Social Determinants of Health’ is not a widely used term, although some of them recognized that the majority of their work is related to SDH. Among important suggestions from the key informants are healthy public policy for all sectors, improvement of inter-sectoral collaboration with minimal bureaucracy, and the development of health policy without interference from political and economic interests.

Recommendations

There is an urgent need for targeting SDH issues related to two core issue: (i) tobacco use, which requires increased restrictions on the tobacco industry, such as advertising bans, clean air legislation, and price and tax actions; and (ii) the low coverage of health services, for example for TB patients, due to transportation costs. Improving the quality of health

care staff in providing more friendly services might further improve uptake of services and treatment adherence.

For INTREC, researchers and policy makers need to work together to discuss evidence on SDH and share understandings of these issues. Appropriate data from regional levels needs to be availed in order to review the situation, suggest solutions, and take actions. In addition, more information and knowledge sharing on SDH are needed. Using the Internet to spread information on the SDH is a particularly suitable channel in Indonesia.

Intensive and more structured training on SDH is needed in order to provide maximum insight of SDH among researchers as well as policy makers in all sectors and at all levels, including NGO workers, students and other community members. The SDH training might not necessarily be conducted in the conventional way through face-to-face meetings in the classroom, but it could equally be run via the Internet, since access is high in much of Indonesian society. This would facilitate a wider reach for participants nationwide.

2. Introduction

The WHO's Commission on Social Determinants of Health was concerned with the dramatic differences in health status that exist between and within countries (CSDH, 2008). It compared, for example, the lifetime risk of maternal death in Afghanistan (1 in 8), to the lifetime risk in Sweden (1 in 17,400) (WHO et al., 2007). It also highlighted the fact that maternal mortality is three to four times higher among the poor compared to the rich in Indonesia (Graham et al., 2004). The Commission argued that these disparities, and innumerable similar ones across the globe, are intimately linked with social disadvantage, and that they are both unjust and preventable.

Addressing health inequities is therefore a moral imperative, but it is also essential for reasons of global self-interest: a more inequitable society is inherently a less stable one. But the Commission recognised the challenges that face steps to strengthen health equity, and, critically, that it requires going beyond the current prevailing focus on the immediate causes of disease. Rather, it is necessary to identify and act upon the 'causes of the causes': "the fundamental global and national structures of social hierarchy and the socially determined conditions that these create, and in which people grow, live, work, and age" (CSDH, 2008:42).

To this end, three broad Principles of Action on these social determinants of health (SDH) were identified in the Commission Report, that together could, it was argued, 'close the gap' of health inequities within a generation (CSDH, 2008:2). These Principles of Action were:

1. Improve the conditions of daily life – the circumstances in which people are born, grow, live, work, and age.
2. Tackle the inequitable distribution of power, money, and resources – the structural drivers of those conditions of daily life – globally, nationally, and locally.
3. Measure the problem, evaluate action, expand the knowledge base, develop a workforce that is trained in the social determinants of health, and raise public awareness about the social determinants of health.

A wide range of actors is required if these Principles are to be effectively implemented. The Commission identified the core actors as the multi-lateral agencies (especially WHO), national and local governments, civil society, the private sector, and research institutions.

This report is concerned with the third of the three Principles of Action – the production of a strong SDH evidence base – and also with the people who are going to produce and then use that evidence base: those working in research institutions, and those with decision-making authority in governments. Current capacity to produce setting-specific, timely, and actionable evidence on the relationship between SDH and health outcomes is limited, and

especially so in low- and middle-income countries (LMICs). Likewise, with limited awareness of SDH among decision makers, and a general global culture that under-utilises evidence within the policy process, there is an urgent need for capacity-building activities to promote informed decision-making that aims at reducing health inequities. As the Report points out, "Knowledge – of what the health situation is, globally, regionally, nationally, and locally; of what can be done about that situation; and of what works effectively to alter health inequity through the social determinants of health – is at the heart of the Commission and underpins all its recommendations" (CSDH, 2008:45).

INTREC (INDEPTH Training and Research Centres of Excellence) was established with precisely this concern in mind. INTREC's two main aims are (i) providing SDH-related training for INDEPTH researchers in Africa and Asia, thereby allowing the production of evidence on associations between SDH and health outcomes; and (ii) enabling the sharing of this information through facilitating links between researchers and decision makers in these countries, and by ensuring that research findings are presented to decision makers in an actionable, policy-relevant manner.

The INTREC consortium consists of six institutions. The one around which most of the work revolves is INDEPTH – the International Network for the Demographic Evaluation of Populations and Their Health in Low- and Middle-Income Countries. With its secretariat in Accra, Ghana, INDEPTH is an expanding global network, currently with 44 Health and Demographic Surveillance Systems (HDSSs) from 20 countries in Africa, Asia and Oceania. Each HDSS conducts longitudinal health and demographic evaluation of rural and/or urban populations. INDEPTH aims to strengthen the capacity of HDSSs, and to mount multi-site research to guide health priorities and policies in LMICs, based on up-to-date evidence (Sankoh and Byass, 2012). The other five members of the INTREC consortium are all universities, which bring their own respective technical expertise to particular components of the work. These universities are Umeå University in Sweden; Gadjah Mada University in Indonesia; Heidelberg University in Germany; the University of Amsterdam in the Netherlands; and Harvard University in the USA.

The work of INTREC will build on the pre-existing INDEPTH network, and is primarily focused on seven countries. In Africa, these include Ghana, Tanzania, and South Africa; and in Asia, Indonesia, India, Vietnam, and Bangladesh are taking part. Starting in 2013, each continent will be served respectively by regional training centres in Ghana and Indonesia. These centres will act as focal points for research and training on SDH for the INTREC countries and, in due course, other low- and middle-income countries. See www.intrec.info for more details.

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1. Current SDH-related training in Indonesia, and gaps identified, as a baseline for INTREC to build on;
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The report ends with a series of recommendations for action, directed at decision makers, programme implementers, as well as at INTREC itself. Based on the comprehensive, empirical background material included in the report, these recommendations will prove to be an invaluable guide for the future development of INTREC, as the programme works towards reducing health inequities in Indonesia, and also in other low- and middle-income countries.

3. Methods

Various methods were used to gather information for different aspects of this report. The report has been put together through conducting desk reviews as well as conducting In-depth interview with professional stakeholders. The methods used for data collection have been described below.

a) Indonesia country profile

Relevant databases pertaining to Indonesia were identified via the Internet. Criteria for selection included the likely reliability of a given database (e.g. WHO was considered as highly reliable), and the degree to which the information given was up to date. Databases such as Wikipedia, and unofficial or private websites were not referenced in this report.

The internet search for data and material included keywords or acronyms, such as “Indonesia”, “fact sheet”, “country information”, “World Bank”, “WHO” (World Health Organization). More specific key words or acronyms were employed for different sub-sections, including “demography”, “geography”, “MDGs” (Millennium Development Goals), “NCDs” (non-communicable diseases), “HIV/AIDS”, “tobacco”, etc.

Cross-references were made where more than one database was available, to synthesize a comprehensive description of the situation. In some instances, WHO databases were the primary sources of information; in others, relevant journal articles were sought to give greater depth to an issue. The data were then presented along with a commentary on the statistical patterns and public health challenges that the country faces.

b) Curricular review

Information on SDH-related curriculum at postgraduate public health schools in Indonesia was collected through using search engines on the Internet. First of all we used terms of “magister kesehatan masyarakat” (master of public health) to find postgraduate public health schools. Based on the Internet searching, we made a list of the schools, including their names, website addresses, and contact information. We then explored the websites of the schools to find out information on curricular that are taught there.

In addition to search on the Internet, we contacted the Association of Public Health School Institutions Indonesia to get information on public health schools in Indonesia. The purpose of contacting the association was to get further information of the schools, especially the right persons on the schools to be asked regarding to the curriculum taught in the postgraduate level.

We also contacted Prof Emeritus Does Sampurno to get information on the story of Public Health Schools in Indonesia, particularly the story of the big five Faculty of Public Health in Indonesia. He was one of the architects who developed public health schools in Indonesia.

c) Literature Review

The literature review was conducted by searching PubMed and Google Scholar for literature published in 2005 and beyond. Because the main focus of the study was on adults and NCD, the key words used were ‘adult’, ‘Non Communicable Disease’, ‘Cardiovascular disease’, ‘Cancer’, ‘tobacco’, ‘Diabetes Mellitus’, ‘kidney’, and ‘Indonesia’. However, we also included other diseases and social issues that are currently receiving serious attention in Indonesia, such as TB, HIV/AIDS and stunting.

In addition we explored INDEPTH-SAGE publications from 2001 through 2011 for the Purworejo HDSS.

Regarding to the SDH-related policies as well as ongoing work on SDH in Indonesia, we collected information through searching on the Internet. We could not search for key words containing ‘Social Determinants of Health’ because it is still an unfamiliar term in Indonesia. Therefore, we searched for certain policies associated with health, such as regulations on health, regulations related to tobacco control, and policies on social security. We also asked key informants during the interview sessions for the policies related to SDH and then we browsed the Internet to obtain information about the policies. The same strategies were applied for getting information on the ongoing work on SDH.

d) Stakeholder Interviews

We conducted interviews of several key informants at national and local levels to develop a better insight of SDH issues in Indonesia. Before conducting interviews, we made a list of potential key informants who were involved in activities related to SDH. We categorised the informants into decision makers, donors, NGOs, WHO, and SDH Experts. Informants were to be interviewed using a ‘category-specific’ interview guide that was produced by a team at Umeå University.

At national level, we planned to interview decision makers in the Ministry of Health, Ministry of Public Work, and a member of the Parliament. We also wanted to interview AusAID, USAID, and IDRC as well as several NGO activists. At local level, we arranged to meet a head district, head of provincial health office, head of local planning agency, and NGO activists. We planned to interview 13 and 10 key informants at national and local levels respectively.

We sent a request letter to the identified key informants, also asking for an appointment for conducting an interview if they agreed to participate. We attached an ethical clearance approval from the ethical committee of Universitas Gadjah Mada along with the guideline of questionnaires. A secretariat staff from the Center of Health Service Management Universitas Gadjah Mada who was appointed to manage the project followed up the letter

by contacting the key informants by phone for further arrangement. We also offered interviews through Skype for IDRC staff because of her office is in Singapore. All interviews would be recorded and transcribed.

In addition to those key informants, we asked for comments and input from 14 working groups that already existed at the Faculty of Medicine of Universitas Gadjah Mada. These included people working on topics such as Alcohol, Tobacco, Violence & Injuries, Cardiovascular disease, Diabetes, Cancer, Food Safety, Health & Nutrition of Child, Maternal Health, Oral Health, Malaria, HIV/AIDS, Neglected Diseases, and Tuberculosis. These working groups will all be invited to future workshops and seminars to receive feedback from the study, and to contribute to developing the ideas for SDH further.

	National		Provincial/ region around the DSS		Total
	Male	Female	Male	Female	
Decision makers – health sector	1		2		3
Decision makers – non-health sector		1	1	1	3
Donors (e.g. USAID, DFID, etc.)	1	2	-	-	3
NGOs/INGOs/civil society/CBOs/FBOs – health sector	1	-	-	-	1
NGOs/INGOs/civil society/CBOs/FBOs – non-health sector	-	1	1	1	3
WHO country representatives	1	-	-	-	1
WHO SDH Commissioner, or other SDH expert	1	-		-	1
Total	5	4	4	2	15

Table 1: A summary of the key informants interviewed

This study successfully interviewed 15 key informants from the 21 that were planned. Six people could not be interviewed because of various factors, particularly time constraints. At national level, the study interviewed two decision makers, including a senior adviser for the Minister of Health and a Parliament member. From donor agencies, the study interviewed AusAID, USAID and IDRC in addition to the representative of WHO Indonesia. A board member of a faith organization and leaders of the health professional organizations are other key informants at national level. At local level, ISS Indonesia interviewed a head of district, head of two provincial health offices (Central Java Province and Yogyakarta Province), a secretary of local planning agency and two local NGOs.

4. Indonesia country profile

Indonesia is a heterogeneous country, which has a great diversity of geographical, demographic, economic, social, political and cultural aspects. By 2011, The World Bank has recognized Indonesia as one of the Asia-Pacific region's most vibrant democracies, that has maintained political stability and emerged as a confident middle-income country (World Bank, 2012).

Geography

Indonesia is the world's sixteenth largest country in terms of land area. It is the largest archipelago in the world and it consists of approximately 17,500 islands, of which around 6,000 are inhabited, located between Asia and Australia. There are five major islands: Sumatera, Java, Kalimantan, Sulawesi and Irian Jaya or Papua bordering with Papua New Guinea. More than 80% of Indonesia's territory is covered with water (WHO, 2012a). See Figure 1.



Figure 1 – Map of Indonesia, and of the South East Asian region

The existence of these numerous islands requires a good transport system for people to be adequately mobile, but the infrastructure is limited in many remote areas, which means access to these parts of the country is difficult. This in itself has created a fundamental inequity between different geographical areas of the country.

Demography

The population of Indonesia is estimated at 239 million (The World Bank), which makes it the world's fourth biggest country in terms of population. 60% of these people live on one island, the island of Java. The national average density is 109 people per sq. km but there are huge differences between the islands; the density of Java is 951 people per sq. km whereas it is as low as 20 people per sq. km in Kalimantan.

Indonesia's age and sex distribution is presented in Figure 2.

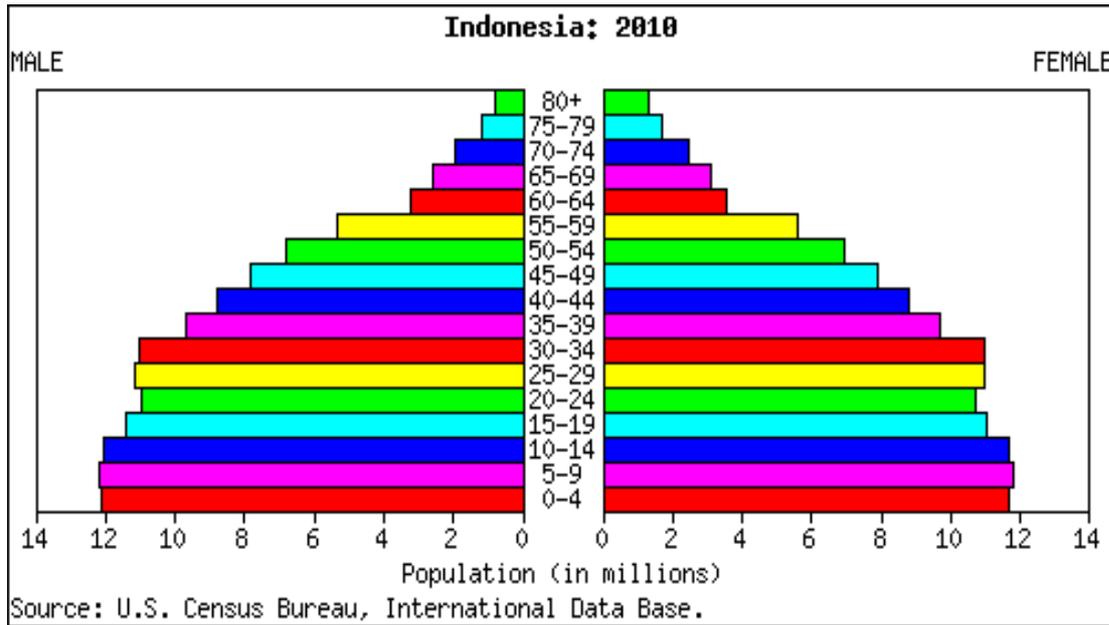


Figure 2 – Age and sex distribution of the Indonesian population

Socio-economic and political context

As stated earlier, Indonesia is a very heterogeneous country, and the different regions of the country have developed in an unequal manner. The western areas of Indonesia (Sumatra, Java and Bali) have enjoyed the fastest rates of growth over the past three decades, leading to a concentration of wealth in these densely populated islands (WHO, 2010).

The national Gross Domestic Product (GDP) per capita in Indonesia was IDR 27 million (USD 2,800) in 2010 (Statistics Indonesia, 2012). The Gross Regional Domestic Product (GRDP) per Capita greatly varies between provinces as well as within provinces. For example, in Papua province, Mimika district had IDR 325 million (USD 34,210) while Nduga district had only IDR 2 million (USD 210), the lowest GRDP per capita in Indonesia.

Decentralization was implemented in 2001, and this had a tremendous impact on the national health system. Districts were given full discretion in prioritizing sectors for development. In many districts health problems did not receive sufficient attention or funding, and this was reflected in the near collapse of several disease surveillance systems. Acknowledging this situation, renewed efforts were made by the government to address implementation issues by revising the legislation governing decentralization in 2004 (WHO, 2012a; WHO, 2010). The new laws and regulations are expected to better address the problems of implementation of decentralization.

Health and Development

While progressing towards the status of middle-income country the health outcomes have significantly improved in Indonesia. The life expectancy at birth has risen from 43 in 1970s to 70.5 years by 2009, which indeed differs for males and females; is recorded at 66 years and 71 years for males and females respectively. The annual population growth rate decreased from 1.97 percent during the 1980s to 1.30 percent in 2005. However, the already large population of Indonesia is expected to increase significantly by 2025 (The World Bank, 2012; WHO, 2012a).

The proportion of population living in poverty dropped dramatically from 60% in 1970 to an estimated 16.6% in 2007 (WHO, 2010). Preliminary results from the 2007 Indonesian Demographic Health Survey (IDHS) also show a significant decrease in the Maternal Mortality Ratio (MMR). The under-five mortality rate per 1000 live births has reduced from 97 (1991) to 44 (2007), and the nation is on track for achieving the set goal of 32 per 1000 live births that was set as a Millennium Development Goal (Ministry of National Development Planning, 2010). Government commitments to work towards the attainment of the MDGs are reflected in the National Development Plan (Propenas), and in national strategies to reduce poverty.

A new Strategic Plan 2010-2014, developed by the Ministry of Health (MoH RI) contains a vision of self-reliance and fairness in healthy communities. The Plan envisages enhancing health status by implementing community empowerment involving private sector and civil society, and by making provisions for equitable health services and resources that are maintained by good governance. Priority strategies include decreasing morbidity rates caused by communicable diseases, implementing non-communicable diseases control programs, and increasing public budget for health to reduce financial risk for health problems-especially for deprived people and communities (WHO, 2010).

Overall, the nation's success and development has resulted in various international awards. Developed countries under the Organization of Economic Cooperation and Development (OECD) have recognized and appreciated development progress in Indonesia. Therefore, along with China, India, Brazil and South Africa, Indonesia was invited to join the "enhanced countries" group, or countries whose engagement with developed countries is increasingly enhanced. Since 2008, Indonesia has also joined the G-20 group of twenty countries which control 85% of the world's Gross Domestic Product (GDP), and which have a critical role in shaping global economic policies (WHO, 2010).

Non-communicable diseases

Chronic diseases such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, are by far the leading cause of mortality in the world, representing 60% of all deaths. Out of the 35 million people who died from chronic disease in 2005, half were under

70 and half were women (WHO, 2012c). The myth that “chronic diseases are diseases of affluence” has caused many health authorities, particularly in low- and middle-income countries, to be unaware of the impending burden of chronic diseases. The association between socioeconomic factors and chronic diseases is well-established (Mackenbach et al, 2000). Poverty and chronic diseases constitute a viscous cycle; a failure to control one of them lead to the continuing growth of the other. For example, people with lower socioeconomic status have higher levels of CVD risk factors and the association is more consistent among women than men (Yu et al, 2000).

NCDs status of Indonesia

Infectious diseases remain a significant challenge to the Indonesia health system, but the threat posed by NCDs is increasing at an alarming pace. In the WHO’s NCD Country Profile 2011, NCDs are estimated to account for 64% of all deaths in the country. The added burden of NCDs, associated with high levels of morbidity, is not limited to affluent populations in urban settings alone, but is also affecting poorer people, reducing their earning capacity and as such contributing to further impoverishment.

Chronic conditions such as cancer, cardiovascular diseases, metabolic disorders and tobacco dependence represent a real burden to the country in terms of cost, suffering and human lives. The age-standardized mortality rate for communicable diseases is 244 per 100,000, whereas the same age-standardized mortality rate for non-communicable diseases is 647 per 100,000.

By 2008 estimates the total number of annual NCD deaths in Indonesia reached 1,064,000, out of which 582,300 were among males and 481,700 in females. Total NCD deaths under the age 60 (percent of all NCD deaths) were estimated as 33.9 for males and 26.3 females. See Table 2.

Age standardized death rate per 100 000	Males	Females
All NCDs	757.0	537.9
Cancers	135.9	108.9
Chronic respiratory diseases	102.3	52.4
Cardiovascular diseases and diabetes	400.2	300.3

Table 2 – NCD age-standardised mortality rates in Indonesia (WHO, 2012b)

The source from which these figures have been reported acknowledge that mortality estimates carry a degree of uncertainty because they are not based on national NCD mortality data. The estimates were generated based on a combination of country life tables, cause-of-death models, regional cause-of-death patterns, and WHO and UNAIDS program estimates for some major causes of death not including NCDs. This highlights the

non-availability of reliable data from most developing countries as suggested by the WHO, and which INTREC aims to address.

Risk factors

The WHO resources present risk factors for NCDs in two parts as the behavioral and metabolic risk factors. The figures for those estimates are provided in Table 3 below.

Tobacco use is one of the major public health threats that Indonesia faces today. Tobacco smoking is highly prevalent, and is highly accepted culturally, especially among males in Indonesia. Boys are often introduced to smoking at an early age, and the habit is used as a means of socializing, as signifying higher status, and portraying a modern life style as well as wealth (Ng, 2006). Around 61% of males and 5% of females aged 15+ smoke, according to the WHO age-standardized estimated prevalence of smoking among those aged 15 years or more in 2009. The prevalence of tobacco use among males remains high at 46.8 %: tobacco use is reported to kill up to 400,000 Indonesians each year.

Behavioral risk factors			
2008 estimated prevalence %	males	females	total
Current daily tobacco smoking	53.4	3.4	28.2
Physical inactivity	31.9	27.9	29.9

Metabolic risk factors			
2008 estimated prevalence %	males	females	total
Raised blood pressure	38.9	27.9	29.9
Raised blood glucose	6.0	6.5	6.3
Overweight	16.3	25.6	21.0
Obesity	2.6	6.9	4.8
Raised Cholesterol	32.8	37.2	35.1

Table 3 – Behavioural and metabolic disease risk factors

Indonesia does not comply with international tobacco control policy efforts. It is one of the nations that has never signed or ratified the Framework Convention on Tobacco Control (FCTC). The country does not follow the WHO compliance on enforcing bans on tobacco advertising, promotion and sponsorship.

In view of the high prevalence of tobacco use in the country, and given the fact that tobacco is the second most important cause of NCD morbidity and mortality, development and implementation of effective tobacco control programme needs to be emphasized (WHO, SEAR 2012). The country's failure to follow the global movement on tobacco control will have serious implications for the population's health and wellbeing.

A major is for Indonesia to ratify the WHO's Framework Convention on Tobacco Control, as fellow countries of ASEAN and of WHO SEAR have already done. Enhanced support is required to achieve a majority in Indonesia's legislative assembly, as a number of parliamentarians are now lobbying for the country to ratify the FCTC.

Country Capacity to address and respond to NCDs

In Indonesia, chronic disease prevention and control is still in its early stages. There is a unit at Ministry of Health that is responsible for NCDs, and there is funding available for treatment and control, prevention and health promotion, as well as surveillance, monitoring and evaluation. A national health reporting system has already been established that includes NCD cause-specific mortality and morbidity and risk factors. However, a population based cancer registry still does not exist in Indonesia.

An integrated policy and action plan has been formulated which is currently operational for the four main NCDs (CVDs, cancer, chronic respiratory diseases and diabetes) and for their four main risk factors (alcohol, unhealthy diet, physical inactivity and tobacco).

5. Review of SDH teaching curricula

a. Summary of Available Courses

Background

The history of public health schools in Indonesia started in 1962 when Dr. Sarjono Sumodidjojo wanted to continue the initiative of Prof. R. Mochtar, a father of public health in Indonesia, by launching a public health faculty at the Universitas Indonesia (Association of Indonesian Public Health School Institutions, 2009). Through intensive advocacy from the Rector and Dean of Medicine Faculty of Universitas Indonesia, as well as the WHO representative for Indonesia, the Ministry of Education finally released Ministerial Decree 26 of 1965, which was then updated with Ministerial Decree 153 of 1965, and which set July 1, 1965 as the founding date of Public Health Faculty of Universitas Indonesia (FKM-UI).

In 1982, on the initiative of the management of FKM-UI and the School of Public Health of University of Hawaii, a long-term cooperative project was set up to develop, strengthen and build four new public health faculties in Indonesia with FKM-UI as a faculty coach. Under the “Faculties of Public Health Development Project”, a GOI-USAID Cooperative Project, 84 Masters and 18 Doctorates have graduated from 10 Schools of Public Health in the USA between 1985 and 1992. After graduating, they returned to their home universities: Universitas Indonesia (FKM-UI), University of Airlangga (FKM-UNAIR), University of Hasanuddin (FKM-UNHAS), University of Diponegoro (FKM-UNDIP), and University of Sumatera Utara (FKM-USU). The public health faculties in these universities are known as the ‘Big Five’ of public health faculties in Indonesia (Sampoerno - personal communication, 2012).

All these universities belong to the government, and they represent public health schools in particular regions. University of Airlangga, for example, is located in Surabaya, representing Eastern part of Java Island. University of Diponegoro is located in Semarang, representing the central part of Java Island. University of Hasanuddin is located in Makassar, South Sulawesi, and it represents Sulawesi and the eastern region of Indonesia. University of Sumatera Utara is located in Medan, North Sumatera, representing Sumatera. Universitas Indonesia is the center of public health school in Indonesia, and is located in Jakarta.

According to the Association of Indonesian Public Health School Institutions (2010), the number of public health schools in the country is growing rapidly right now. In 2010, there were 78 public health schools listed as members of the Association nationwide, but of these only 41 had been accredited by National Accreditation Agency for Higher Education in the same year. Moreover, the National Accreditation Agency listed only 10 institutions as being accredited postgraduate schools of public health in Indonesia in 2010. Some of these schools are owned by the government while others are owned and managed by private

institutions. Some of the schools are under the Faculty of Public Health; and others belong to the Faculty of Medicine. The different is that the schools of public health usually run undergraduate program and only a few have postgraduate programs, while schools under the Faculty of Medicine run only postgraduate programs.

Although the number of schools of public health in the country continues to grow, the curricula used in schools are always referring to the Big Five, particularly the Public Health Faculty of Universitas Indonesia (FKM-UI), Jakarta. Therefore this study focuses on the postgraduate public health curriculum related to Social Determinants of Health at FKM-UI. In addition, the study also looked at postgraduate curriculum of public health science of Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta. Unlike the Universitas Indonesia, where public health postgraduate studies are implemented under the Faculty of Public Health, the PostGraduate School of Public Health Science at Universitas Gadjah Mada is performed under the Faculty of Medicine of Universitas Gadjah Mada.

Universitas Indonesia, Jakarta

Faculty of Public Health of Universitas Indonesia (FKM-UI) was launched in 1962 on the initiative of Prof. Mochtar. The Faculty initially offered only a Master of Public Health before starting to offer Bachelor Degree in Public Health in 1987, thereby fulfilling the requirement as a faculty/school in accordance with Education Law in Indonesia. Since 1990, FKM-UI has offered a Master of Public Health Science, a Master of Hospital Administration, Master of Safety and Occupational Health, and Master of Epidemiology. Additionally, in the same year FKM-UI offered a doctoral degree in Public Health Sciences and Epidemiological Studies (Faculty of Public Health Universitas Indonesia, n.d).

The curriculum of the Master of Public Health consists of mandatory subjects of faculty, mandatory subjects of study program, mandatory subjects of specialization, and elective courses. Every student from all study programs should take the mandatory subjects of the faculty. It is also an obligation for students enrolled in the specific study program to take courses that are only offered on the study program. Similarly, only those who enrolled in the specialization take the specialization courses.

However, among all subjects taught in the Public Health Postgraduate program at the Faculty of Public Health of Universitas Indonesia, there is no subject that explicitly teaches about social determinants of health. There is only one subject that has one session specifically on the social determinants of health: Health Policy, which is taught as a mandatory subject in several main streams, such as Health Economics, Health Insurance, Health Policy, Health Service Management, Pharmaco-economics, Law & Health Policy.

In addition to the postgraduate program, Faculty of Public Health at Universitas Indonesia also has an undergraduate program in public health. Nevertheless, the postgraduate

program is not merely a continuation of the undergraduate program. People from many educational backgrounds register as postgraduate students at the public health school.

Universitas Gadjah Mada, Yogyakarta

Although it was initially launched in 1982, the Postgraduate School of Public Health Science Program of Universitas Gadjah Mada was formally established on July 4, 1994 through a Decree of the Director General of Higher Education Number: 167/Dikti/Kep/1994. In September 2001, it was accredited with the title superior from the National Accreditation Agency for Higher Education (Program Pasca Sarjana Fakultas Kedokteran S2 Ilmu Kesehatan Masyarakat Universitas Gadjah Mada, 2007a).

The school runs an interdisciplinary program. It is not an extension of undergraduate of public health program of Faculty of Medicine. Thus the implementation of the curriculum is not integrated with the undergraduate educational program. The school is an independent entity with its own management. In addition, it integrates the disciplines among faculties.

The development of the school can be divided into several periods: (1) Period of Public Health as a Study Program (1983-1990), (2) Period of development of the main streams (1990-1998), (3) Period of international co-operation with various international leaders in education and research (2000 and after).

Along with the development of information technology, the graduate school of public health science has developed intensive regular classes as well as long-distance learning run through the Internet.

The graduate school of public health science of Universitas Gadjah Mada has 11 main streams or majors right now. They are (1) International Master of Public Health, (2) Field Epidemiology, (3) Nutrition and Health, (4) Environmental Health, (5) Maternal and Child Health – Reproductive Health, (6) Financing Policy and Health Insurance Management, (7) Health Policy and Service Management, (8) Management and Drug Policy, (9) Hospital Management, (10) Health Promotion and Behavior, (11) Health Information System and Management.

The Public Health Science postgraduate program at Universitas Gadjah Mada does not teach social determinants of health (SDH) as an independent subject. SDH is taught as a component of other subjects, for example ‘Social and Behavioral Science in Public Health’, and ‘Priority Health Problem’.

The Public Health Science program at the Faculty of Medicine of Universitas Gadjah Mada (IKM-FK-UGM) is only offered at postgraduate level. There is no public health taught at undergraduate level. Therefore, students are coming from many kinds of educational

backgrounds, not only from medical or health science, but also from other bachelor degrees such as engineer, architect, economy, law, and IT.

The Public Health Science program has a core curriculum of courses that must be taken by all students. This is in accordance with the guidelines of the ASPH (Association of Schools of Public Health). The core curriculum includes 22 credits, including: Biostatistics, Epidemiology, Health Services Management and Policy, Research Methodology, Social and Behavioral Science in Public Health, Environmental Health, and the production of a Thesis.

Conclusion

Social determinants of health have not taught as separate subjects in either of the public health schools discussed: the FKM-UI and the IKM-FK-UGM. Some subjects put SDH within some sessions, such as Health Policy at FKM-UI, and Social and Behavioral Science in Public Health and Priority Health Problem at IKM-FK-UGM. Most subjects at the schools have some SDH-related component to them.

In contrast to the FKM-UI which has a public health bachelor degree program in addition to postgraduate program, IKM-FK-UGM offers only postgraduate health science programs. However, students at postgraduate of FKM-UI and IKM-FK-UGM have the same characteristics, with diverse backgrounds ranging from engineers to computer specialists, although most students are still those with a background of medicine and health sciences.

b. Training Gaps

The terms ‘Social Determinants of Health’, or SDH, are not widely used or understood in Indonesia. Although SDH applications have been implemented in daily work, many people do not associate this with SDH. Moreover, SDH is not taught explicitly in any graduate schools of public health in Indonesia. SDH is taught as only a component of different courses. Therefore, students do not get a comprehensive understanding of SDH, practically or conceptually.

There is also a very limited number of seminars, workshops and trainings on SDH in Indonesia. Many of those that exist are run through particular departments of the Ministry of Health. The participants who attended the seminars are also very limited to those who work in the health sector. Therefore, the knowledge of SDH is not spread widely. The knowledge is not just only very inadequate among those who work in the health sector but also those who work in other sectors. Thus, the number of seminars, workshops and trainings on SDH needs to be increased.

An intensive and more structured training on SDH is also needed in order to provide policy makers from all sectors and all levels, NGO workers, students and other community members with insights into SDH. The SDH training need not necessarily be conducted in the

conventional way, through face-to-face meeting in the classroom. It can also easily be done through the Internet. Training modules could, for example, be uploaded onto the official website of the SDH Asia (www.socialdeterminantofhealth-inasia.net), which is currently being developed by the Centre for Health Service Management of Faculty of Medicine of Universitas Gadjah Mada (CHSM FK UGM).

SDH training online can take the example of the health policy research training, which is being managed by the CHSM FK UGM. All participants are registered online at the dedicated website, where instructions and training materials in the form of modules and tasks have been uploaded. Participants conduct discussions on a particular topic with colleagues from a mailing list created specifically for this training. In addition, there is an audio streaming delivered every week by an instructor. The participants can follow interactive discussions with the instructor, and it is recorded.

Over 100 participants from all around the country have followed this health policy research training since June 2012. The participants come from various educational backgrounds. Though the majority of participants are those who work in the health sectors, there are some participants from outside the health sectors. Critically, all participants have access to the Internet wherever they live. They can follow the discussions and they can access information sent to their email account, including via smart phones and smart pads. Therefore, online training on a specific topic would be very possible to implement in Indonesia, as a means of reaching many participants nationwide.

Regarding Internet access, approximately 55 million Indonesians had access to the Internet at the end of 2011. This placed Indonesia as the fourth largest Internet user in Asia after China, India, and Japan (Miniwatts, 2012). Through the program Internet Car Service Center, the government aims to have 80 million Internet users in Indonesia at the end of 2014 (Dikinet, 2012). The program provides all sub-districts in Indonesia with the Internet access, though the average speed of Internet in Indonesia was 772 kbps at the end of 2011.

Given the widespread access to the Internet in the country, and seeing the results achieved by the health policy research training, it is clearly possible to implement Internet-based training on SDH, not only from those who work in the health sector, but also from those who work outside the health sector:

- All modules of training, instructions and assignments can be uploaded on the website of SDH in Asia (www.socialdeterminantofhealth-inasia.net).
- Archives of the audio streaming that contain discussions on specific topics with the experts could be accessed on the website.
- In addition to mailing list, discussion among participants, facilitators and instructors could be created on the SDH website.

To attract more participants to take part in the SDH training, the idea of inviting the best 20 participants to attend a two-days face-to-face meeting, as on the health policy research training, can also be applied on the SDH training. Costs of accommodation and meals during the meeting would be borne by the organizers. Participants need only to spend transportation costs from origin city to the meeting location. As for the criteria of the best participants are those who are actively involved in discussions on mailing lists and interactive dialogue during the audio streaming, sends the task on time, and submits a preliminary proposal for the research. Of the 20 best entries, the committee will select 5 participants to get stimulus funds for conducting research on SDH.

Inter-sectoral collaboration is necessary for the success of the training activities. The collaboration should include support participants form all sectors along with funding support. If funds were sufficient, more participants who received stimulus funding for research would be great for the development of SDH in Indonesia. Moreover, it would be more beneficial for Indonesia if the participants could disseminate the research finding at national and international seminars, as well as publish the results on the national and international accredited journals.

6. Literature Review on Social Determinants of Health in Indonesia

a) Social Determinants of Health in Indonesia

Based on the search criteria, we found results from:

- 2 national health surveys
- 37 articles related to SDH county needs. These included:
 - 29 articles on non-communicable diseases (16 articles on tobacco, 3 articles on CVDs, 6 articles on obesity and hypertension, 2 articles on diabetes mellitus, 1 article on oral cancer and 1 article on kidney transplantation)
 - 8 articles on communicable diseases (4 articles on TB, 4 articles on IDU and HIV/AIDS)

Although most of the articles are focused on Yogyakarta, this does not mean that the study is focusing only on Yogyakarta. To ease the discussion, the articles are classified below according to the diseases: non-communicable diseases and communicable diseases.

i) Non-Communicable Diseases

As mentioned previously, non-communicable diseases contribute to about 64% of all deaths in Indonesia. Cardiovascular diseases accounted for about 30% of deaths, following by cancer, respiratory diseases, diabetes, and other NCDs. Unhealthy behaviors like tobacco use, poor diet, and less physical activities are the main risk factors for CVDs.

Social determinants related to Tobacco use

Indonesia is the only country in Asia that has not ratified the WHO Framework Convention on Tobacco Control (WHO, 2011b). It is therefore not surprisingly that with 261 billion cigarettes consumed every year, Indonesia has the fourth highest cigarette consumption country in the world after China (2,265 billions), India (390 billions), and the USA (316 billions) (Eriksen et al, 2012). One study indicated that 64.7% of the youth are exposed to tobacco at home (Ministry of Health, 2010). Furthermore, smoking-related illnesses have killed at least 400,000 people each year nationwide. There is an increasing prevalence of smoking among young children, with a 400% increase among the 5-9 year olds, and 40% increase among the 10-14 year olds (APACT, 2010).

The 2010 Basic Health Survey (Ministry of Health, 2010) found smokers who had started smoking at age 5-9 years. In addition, tobacco use in 2010 among boys aged 13-15 year olds was 41%, while among girls the same age the rate was 3.5%.

The massive promotion of cigarettes by the tobacco industry has caused increasing number of smokers, especially young smokers. Because most of the cigarettes consumed in Indonesia are 'kretek' (the Indonesian native cloved cigarette) that is regarded as a national heritage, the company that produces kretek cigarettes also emphasizes the social and

cultural aspects in their advertisements. Therefore, most of the kretek advertisements carry the theme of traditional values. Some kretek advertisements also consist of reflection on the political situation and on one's position in the society, as they seek to play on people's emotions. To attract novice young smokers, additionally, the cigarette advertisements feature an impressive display that smoking is masculine, modern, and part of a globalized world (Nichter et al, 2008).

The 2006 Indonesia Global Youth Tobacco Survey (Aditama et al, 2008) reported that 12.6% of students smoke cigarettes. The smoking prevalence among boys was 24.5%, significantly higher than girls, of whom only 2.3% said they smoked. More than 64% of the students reported becoming secondhand smokers from other people in their home, and over 81% were exposed to smoke from others in public places. Almost 88% of the students thought smoking should be banned in public places. Furthermore, 93% of the students were also exposed to advertisements for cigarettes on billboards and 83% of them had seen a lot of cigarette advertisements in newspapers and magazines. About 60% of the students bought cigarettes in a store and 73% were not refused purchase because of their age. More than 14% of the students had been offered free cigarettes by tobacco company representatives, and 10.8% students owned an object with a cigarette company logo on it. Nevertheless, more than 76% students preferred to stop smoking in the year of survey. Some 85.5% students failed to stop smoking during the past year and 82.4% smokers received help to stop smoking.

Another school-based survey on 3rd year medical students in 10 medical schools in Indonesia (Aditama et al, 2006) showed that 70% and 35% of male and female Indonesian medical students had ever-smoked cigarettes, even if this was just a single puff. Some 73.6% of them reported starting to smoke before the age of 15. Even though 45% of the respondents were exposed to smoke at places where they stay, and 80% were exposed at public places, the majority of respondents (92%) stated that smoking should be banned in all enclosed public places. A majority of respondents (95%), additionally, agreed that tobacco sales to adolescents should be banned, although only 60% of medical students considered a total ban on smoke advertisement. Less than half of the medical students (42%) knew the official policy on banning smoking in their campus, but 42% of them felt that the policy was not implemented properly. However, the survey found that 76.5% of the smokers wanted to stop smoking and more than 85% of the students had tried to stop smoking.

In terms of training to support smoking cessation, Aditama et al (2006) found that almost 80% of the medical students did not receive any formal cessation counseling training. Though 82% of the participants had already learned to take patients' tobacco use as part of medical history, and 57% had learned to provide education materials to support cessation among patients who want to quit, more than 95% of the students wanted to get training on

smoking cessation counseling as part of their formal curricula. The survey also showed that 98% of the medical students argued that they should have a role in counseling patients to quit smoking. The study suggested smoking cessation consultation technique should be included in the curricula of Medical Schools in Indonesia.

Medical education institutions play a significant role in motivating medical students to be non-smokers. The schools are responsible for providing supporting environments that discourage smoking behavior. It is therefore important that smoking warnings and anti-smoking posters are posted in strategic places around the faculty facilities to inform people about the non-smoking areas. A survey on opinions regarding tobacco control policy among medical students found that 90% of the respondents agreed that the Faculty of Medicine should be a non-smoking area. Over 88% of the students also agreed that medical students are a role model for non-smoking behavior. The survey showed that the effective existing communication among students and among supporting staff could increase the awareness of smoking behavior. The survey concluded that continuously strong advocacy is needed to ensure that the tobacco control policy works in medical education institutions (Fatwa, 2006).

An assessment to Physicians in Yogyakarta (Ng et al, 2007) found that over 20% of male doctors and 1% of female doctors were current smokers. Over 80% of physicians believed that smoking up to 10 cigarettes a day would not harmful for health. Therefore, three-quarters of the doctors did not routinely ask patients about their smoking status. Those who routinely assessed their patients' smoking had not advised them to quit smoking. Though 28% of doctors said they had given anti-smoking advice to patients, only 10% of patients recalled such advices. It was also very rare for doctors and patients to discuss smoking in the clinical contexts. Fewer than 10% of patients asked their doctors whether their illness was related to smoking, or asked help to quit. Furthermore, most physicians were more likely to ask about the patients' smoking status for heart disease and respiratory disorders than for other diseases. Thus, patients feel the advice not to smoke was restricted to the illness period only. Limited engagement of doctors in smoking cessation counseling might be caused by a lack of confidence of doctors in their ability to counsel patients. Inadequate training in smoking cessation might also cause it. Only 8% of physicians thought that they already had sufficient training in smoking cessation, though almost 85% of physicians reported that they were interested in receiving training in cessation counseling. The study suggested training for physicians to educate them about the importance of routinely asking their patients about their tobacco use, and offering practical advice on how to quit smoking.

A randomized pilot study on motivating patients to attend smoking cessation sessions in a lung clinic in Yogyakarta showed that culture influences patients' decisions to attend smoking cessation counseling session. Physicians' advice to patients for attending a clinical-based smoking cessation program was effective with or without a pre-counseling

educational intervention. In Javanese culture, it was impolite for patients to refuse a directive from health staff who they believed have a higher social status. Therefore, among 276 participants, only 5 people refused to participate in counseling. Nevertheless, less than 5% of patients returned to the clinic for a follow up counseling session. Poor attendance at a follow up cessation session suggested adherence to practitioner's advice was time-limited (Ng, 2006).

A study on smoking cessation among tuberculosis (TB) patients was also conducted in Yogyakarta (Ng et al, 2008). There were 239 male TB patients who had completed DOTS-based treatment, and who were interviewed at home using a semi-structured questionnaire. The study showed that over 30% of the patients were never asked about their smoking behavior or advised about quitting during the treatment. Therefore, most TB patients quit smoking when diagnosed with TB and only 11% remained smoking while on TB treatment. Of those who quit smoking during the DOTS treatment, 7% had relapsed at the end of 6 months of the treatment, 30% had resumed smoking daily at 6 months after the treatment, 10% smoked occasionally, and almost 60% remained free from smoking. Some 60% of those who relapsed did not receive TB-specific smoking messages from the health professionals. The study suggested that health care professionals and DOTS providers should actively promote smoking cessation for TB and former TB patients, and help them to maintain the abstinence. DOTS providers that were mainly family members of the patients were in a good position to retain abstinence after TB treatment due to the fact that relapse was happened soon afterward and at a time when they had minimal contact with health care professionals.

A study related to smoking cessation among diabetes patients that was conducted in Yogyakarta concluded that smoking cessation was not a routine part of diabetes counseling in most diabetes clinics. The smoking cessation counseling did not get much attention from health care practitioners although smoking is strongly associated with serious complications among diabetics. The questions about smoking only related to normative behavior in the clinic with no specific messages related to particular symptoms and diabetes complications. Therefore, patients were not aware of the serious complications to their health of continuing smoking. They still underestimated the hazards of smoking by consuming mild cigarettes that they believed harmless and safer as long as they did not smoke in great excess. Additionally, most diabetic patients who were told by their physicians to stop smoking for certain medical conditions often misunderstood the messages. They assumed that they should stop smoking when experiencing acute symptoms. This study therefore suggested the importance of teaching health care professionals in medical and nursing schools about the dangers of smoking, and to see smoking as a major risk factor for diabetes onset and complications, as well as providing them with the skills to actively ask, advise, and assist patients to stop smoking (Padmawati et al, 2009).

Another study on smoking cessation for patients with diabetes in Yogyakarta found that doctor's advice on smoking cessation along with the presence of a cessation clinic led to increased understanding of smoking-related harm among patients with diabetes. They were also motivated to quit smoking. The study divided 71 patients into two groups in which 33 people were randomized to doctor's advice and visual representation on how tobacco affect diabetes (DA) group, and other 38 people who got doctor's advice plus direct referral to a cessation clinic (CC) group. At 6 months of follow up, the two groups had abstinence rate of 30% and 37% respectively. Moreover, some 70% of DA group and 88% of CC group who continued to smoke had attempted to quit or reduce smoking. The study suggested that doctor's brief disease-centered cessation messages had a significant impact on diabetes patients (Ng et al, 2010).

Regarding passive smoking, a project to reduce Second Hand Smoke (SHS) among women and children was initiated by Quit Tobacco International in Yogyakarta. About 530 households that had at least one family member who currently smoke joined the baseline survey for the project. The survey found 70% of women reported to be passive-smokers in their houses, even though they disapproved of anyone smoking inside the house. Some 85% women reported that there were no rules against tobacco use inside the house, while another 15% reported that smoking was only permitted in a room that had a fan, while a few households permitted smoke just outside the front or back door. However, the women who had such household rules could not resist whenever there was guests visiting the house and they wished to smoke in the house. They would be considered rude if the guests were prohibited smoking in the house since smoking is viewed as a normative part of Indonesian male culture. The study suggested framing SHS as a family health issue and an action to caring for one's family as the best way to encourage a nonsmoking norm in the home among Java society (Nichter et al, 2010).

A study on aggregate data from a nutritional surveillance system on smoking, household expenditures and child malnutrition in 175,583 households from urban slum areas in Indonesia revealed that paternal smoking (prevalence 74%) was associated with an increased risk of child malnutrition, such as underweight and stunting. The majority of poor families in urban slum areas diverted household money from food to tobacco. Approximately 22% of weekly expenditure per capita of households where the father was a smoker was spent on cigarettes. This limited the proportion of money that was spent on foods such as animal foods, vegetables and fruits, rice and other staples, snacks and baby food, sugar and oil. The study therefore suggested that tobacco control, poverty alleviation and child health promotion should not be looked upon as mutually exclusive efforts (Best et al, 2008).

Using the Indonesian Family Life Survey covering the period 1993-2000, Hidayat & Thabrani (2011) tried to estimate the demand for cigarettes in Indonesia according to the Rational

Addiction Framework. This framework suggests that people recognize the addictive nature of the goods but decide to consume it because the pleasure gained from the cigarettes is greater than the costs associated with the activity, including health problems.

Hidayat & Thabrani (2011), moreover, found that Indonesian smokers were irrational. They ignored the future implications of smoking when making current decisions. This was an important message to public health policy when making strategies to change smokers' perception on the risk of smoking. This finding suggested that increasing price of cigarettes through excise taxes could lead to a significant fall in cigarette consumption in the long run while simultaneously acting as a constant source of government revenue.

However, a study on the tobacco excise system in Indonesia concluded that under the current system of tax administration, increasing tobacco excise rates would not have a significant health impact. Revenue and employment targets were the main government's rationale for modifying the system. The structure of tobacco excise in Indonesia varies by types of tobacco products (kretek or white tobacco), mode of cigarette production (machine-made or hand-rolled), and firm size to measure production level (number of sticks produced annually). The excise cap rate for tobacco was 57 percent of the government's banner price, which is the government's retail sales price for specific brands and firms. The actual price at point of sale must be the same or lower than the banner price, therefore the banner price is the maximum price of cigarettes at point of sales in practice. The study suggested price and tax as a measurement to promote reduction in tobacco consumption (Barber & Ahsan, 2009).

Nevertheless, high prevalence of tobacco consumption in Indonesia has an impact on health care costs of diseases related to tobacco use. A study conducted by the National Health Institute for Research and Development concluded that the medical costs of tobacco consumption in Indonesia in 2005 are 12,7 trillion rupiahs, or equal to US\$ 1.27 billion. Patients hospitalized for Respiratory Diseases accounted for US\$828.6 million, followed by Cardiovascular Disease (US\$353.5 million), Neoplasm (US\$12.7 million), and other diseases (US\$82.2 million). The study also provided evidence that tobacco use had affected government ability to allocate limited resources to other social priorities, in addition to causing severe economic tolls on family and society resources, as well as on public sector health care resources (Kosen, 2006).

Additionally, growing numbers of Indonesians who smoke regularly have contributed to a growing burden of non-communicable diseases and enormous demands on the health care system. Commitment of government to produce policies on tobacco control has remained low in Indonesia due to the contribution of tobacco industries to government revenues and employment. However, tobacco employment in the industrial sector has dropped significantly to be only 5.6% of total manufacturing employment in 2005, compared to 38%

in the 1970s. Following the first tobacco control regulation passed in 1999, and that was succeeded by amendments in 2000 and 2003, few restrictions exist on tobacco industry, such as advertising bans, clean air legislation, price and tax measures as well as public education (Achadi et al, 2005).

Regarding to the tobacco cultivation and alternate crops in Indonesia, a study found that shifts from tobacco to alternate crops cultivations would face no serious problems to tobacco farmers. In addition to grow tobacco, most farmers in lowland areas also cultivate rice, hybrid corn, red chili and soybean. They generally cropped tobacco after rainy season rice. In the highland areas, tobacco was cultivated after the rainy season potatoes. Other farmers who continued to cultivate tobacco were justified by the high profit of the crop. Nevertheless, there were some farmers who ceased tobacco production and shifted to other crops due to uncertain tobacco price, increasing production costs, unsound market condition and no longer support from government on tobacco development. Therefore, a comprehensive approach was needed to support a massive shift from tobacco to alternate crops, including provision of financial support, marketing services, and farmer's organization preparation (Hadi et al, 2008).

In summary, the main social determinants related to smoking in the Indonesian context are that Indonesia does not have strict regulations regarding tobacco control, as well as the fact that Indonesia has not ratified the FCTC. Cigarette advertising and tobacco sponsorship in sports and the performing arts are very massive. People smoke everywhere and anytime even inside their houses, which results in increasing the number of passive smokers. Clinical consultations to quit smoking are still very rarely done, either in clinics, health centers, or in the treatment of tuberculosis and diabetes patients. Smoking cessation techniques and consultation have also not been taught in the medical schools.

Social determinants related to cardiovascular diseases, obesity and hypertension

In addition to lack of physical activities, various studies have indicated smoking is a significant risk factor for coronary heart diseases. Smoking accelerates the development of coronary plaque and it is a strong risk factor for myocardial infarction. A study was conducted to find out the correlation between kretek, an Indonesian native gloved cigarette to the high risk of CVDs by using data from the Basic Health Survey of 2007. The study estimated the prevalence of CVDs among 100,009 males aged 45 years and over by smoking behavior and socio-demographic characteristics. The study found that prevalence of CVD was slightly lower among those who smoked kreteks than among those who smoked non-kreteks or a mixture of non-kreteks and kreteks. The prevalence of CVDs was significantly higher among former smokers with the duration of smoking for more than 20 years. The prevalence was also higher among older groups. Since the population of Indonesia is relatively young, the study suggested the Government should ratify the Framework

Convention on Tobacco Control and start implementing measures to control tobacco use due to adverse future health care costs (Sumartono et al, 2011).

Cardiovascular diseases do not just occur among the elderly, but also in the productive ages. The 2007 Basic Health Survey showed that almost 30% of patients with heart diseases were those in the productive years (25 – 54 years old). A study conducted in Kalimantan tried to identify the prevalence and risk factors for CVDs among mineworkers in a mine company in Kalimantan by obtaining records of medical check-ups of the workers. The study found that the prevalence of CVDs among mine workers was 1.2%. The main determinant factors of CVDs were hypertension, obesity, waist circumference and occupation. Hypertension and waist circumference were related to interfering with the lipid metabolism that lead to atherosclerosis and accelerates the CVD. Occupational factors were related to physical inactivity in non-manual jobs. The study suggested a proper education of the risk factors of CVDs to the mine works as an optimum prevention of CVDs (Shabrina, 2012).

Another study on the National Cardiovascular Center (NCVC) and other five hospitals in Jakarta revealed that heart failure was a leading cause of hospitalization and readmission. The heart failure patients in Indonesia were younger, and sicker with a poor ejection fraction and diabetes. The re-hospitalization rate of hypertension was 29% while the in-house mortality rate reached 12%. The most common predictors for readmission were poor compliance, poor ejection fraction, and diabetes. The study suggested for better heart failure services (Siswanto et al, 2010).

Obesity is a major risk factor of several degenerative and metabolic diseases, one of which is hypertension. Hypertension has not only become a serious problem in developed countries, but also in developing countries such as Indonesia. People are said to be hypertensive if their systolic blood pressure >140 mmHg and/or diastolic >90 mmHg (new hypertension case) (Rahajeng & Tuminah, 2011). The 2007 Basic Health Survey showed that the prevalence of hypertension was about 31.9% (Ministry of Health, 2008). A study on prevalence of hypertension and its determinants in Indonesia showed that the hypertension prevalence in Indonesia in 2007 based on measurement and diseases history was 32.2%. The prevalence was similar to the 2007 Basic Health Survey (31.9%). The substantial determinants of the hypertension were elderly, male gender, low education, obesity, and abdominal obesity. The study suggested decreasing the prevalence of hypertension through improving prevention programs and control of non-communicable disease and risk factors (Rahajeng & Tuminah, 2011).

Using data from the 2007 basic health research and the 2007 National Health Survey, a study on hypertension among adult obese respondents was conducted in Indonesia (Sihombing, 2011). The study found that prevalence of hypertension in obese respondents above 18 years old was 48.6%; hypertension among obese male (50%) was slightly higher

than among obese female (48%). The risk of hypertension, moreover, increased in obese respondents aged 55 years and above; being male, lower education, former smokers, and physically inactive. There was no correlation between hypertension and economic status, meaning anyone with a high economic status or low economic status was equally likely to get hypertension if they did not maintain healthy lifestyle. However, there was no statistically significant association between living area, consumption of salty food, caffeine beverages, and flavoring, with hypertension in this study.

Nevertheless, a study on various determinants of blood pressure among urban elderly in Jakarta showed that among normal weight elderly people, mono-unsaturated fatty acid, saturated fatty acid, and sodium intake, plasma total cholesterol level, the ratio of total cholesterol to HDL-cholesterol and a sport Index were determinants of blood pressure. Additionally, potassium intake, calcium intake and BMI were determinants of high blood pressure among overweight elderly (Kamsu et al, 2007).

Hypertension is well understood by general practitioners as well as specialists. Surveys on participants of annual scientific meeting of Indonesian Society of Hypertension from 2007 to 2009 found that three quarter of respondents measured blood pressure properly. More than 50% respondents addressed correctly all questions related to knowledge of hypertension therapy. They also understood that the most common target organ damage of hypertension was brain, heart, and kidney. Irregular medication, additionally, was the most common cause of uncontrolled blood pressure. The survey also presented that the most common complications encountered in patients with hypertension was a combination of stroke, heart failure and chronic kidney disease. Factors that caused failure of hypertension therapy included inability among patients to buy drugs, selection and preparation of drugs, as well as complicated and poor explanations and education of hypertension from the doctors (Rohman et al, 2011).

In developing countries, obesity is not only associated with hypertension, but it often coexists with malnutrition. The 2007 Basic Health Survey suggested that over-nutrition was quite high in adult females, though it was found among all age groups in rural and urban areas. Malnutrition is also very common among children and teenagers. Some 14% of children under the age of 5 were undernourished, while 12% of them were obese. Approximately 10% of teenager's ages 6-14 years were under-nourished while 6% of them were over-nourished. A study on obesity as a poverty-related emerging nutrition problem was conducted to raise awareness on the increasing obesity problem in Indonesia. The study concluded that dietary changes, increasing physical activity and behavioral modification were needed to overcome obesity among adults. Primary attention on nutrition intervention should be given to female adolescents, pregnant mothers and the first 2 years of life. It is also important to initiate nutrition education for school-age children as well as to disseminate a holistic healthy framework approach with key message 'initiate

healthier food choices'. Prompt Nutrition Guidelines and the use of lower body mass index cut-off should be considered (Usfar et al, 2010).

In summary, the main social determinants related to cardiovascular diseases are smoking, obesity, waist circumference and occupation. In addition, the main social determinants related to obesity and hypertension are old age, male gender, low education, former smokers, physical inactivity, and malnutrition. Inabilities among patients to buy drugs, as well as complicated and poor explanations and education of hypertension from the doctors have been raised as factors that cause failure of hypertension therapy. In Indonesia obesity often coexists with malnutrition and is viewed as a poverty-related emerging nutrition problem

Social determinants related to Diabetes Mellitus

Diabetes Mellitus (DM) is a chronic disease characterized by increased blood sugar levels as a result of disruption of the metabolism of the body. The pancreas is not able to produce the hormone insulin to meet the needs of the body. Based on symptoms and diagnosis of health workers, the 2007 Basic Health Survey showed national prevalence of DM was 1.1% (Ministry of Health, 2008). A study was conducted to estimate the prevalence of diagnosed and undiagnosed DM and Impaired Glucose Tolerance (IGT) among males aged 15 years and over in urban Indonesia (Mihardja et al, 2009). Risk factors such as age, smoking, physical inactivity, obesity and hypertension that were associated with DM were also analyzed. The study found 5.7% of those who lived in urban Indonesia had diabetes with 1.5% diagnosed diabetes mellitus, 4.2% undiagnosed diabetes mellitus, and 10.2% IGT. The prevalence of diabetes among males (6.4%) was higher than among women (4.9%). The risk of getting DM increased with age and rose sharply after middle age (35 – 54 years). The risk factors of IGT and diabetes were age, obesity, central obesity, hypertension and smoking. The study concluded DM became a major public health issue and national strategies were needed to screen, prevent and treat DM.

Another study focused on finding the prevalence and predictors of undiagnosed diabetes mellitus in Indonesia (UDDM) (Prmono et al, 2010). Without any clinical symptoms reported, previous history of diabetic medication, and diagnosis from medical doctors, the diagnosis of UDDM could be indicated through blood glucose level examination and oral glucose tolerance test. The study concluded that the prevalence of UDDM among population aged 18 years old and above was 4.1% from total 5.6% of diabetic population in Indonesia. Similar to the previous study, the prediction factors of UDDM in Indonesia were age, obesity, central obesity, hypertension, and smoking habit. However, those who have never smoked and ex-smokers had a higher probability of having UDDM compared to smokers. Additionally, the probability of having UDDM was also bigger among those who had obesity, central obesity and hypertension.

The main social determinants related to diabetes mellitus are thus related to age, smoking, physical inactivity, obesity and hypertension. Similarly, the prediction factors of undiagnosed diabetes mellitus in Indonesia were age, obesity, central obesity, hypertension, and smoking habit.

Social determinants related to Oral Cancer

World Health Organization estimated that cancer contributed to 13% of deaths in Indonesia in 2010 (WHO, 2011a). One risk factor of cancer is types of food consumed each day. A study on association between oral cancer and dietary pattern in Jakarta found that the consumption the highest tertile of the “preferred” pattern (fast food, canned food, and fermented food) increased the risk of oral cancer by two times compared to the lowest tertile of consumption. While the “chemical related” pattern (processed food and monosodium glutamate) showed higher risk of about threefold, the “traditional” pattern (drinks and grain) showed an increase of risk by twofold. Nonetheless, protective effects in relation to oral cancer were given by the “combination” pattern of food, such as the intake of dairy product, red meat, white meat and fruits. The study suggested the usefulness of factor analysis to determine the diet pattern of a big set of food type and establish the correlation with oral cancer (Amtha et al, 2009).

Thus, the main social determinants related to oral cancer are dietary patterns associated with processed food, monosodium glutamate, fast food, canned food, and fermented food. However, the “combination” pattern of food, such as the intake of dairy product, red meat, white meat and fruits give protective effects in relation to oral cancer.

Social determinants related to Kidney Transplantation

Organ transplantation is still a big issue in Indonesia. A literature study on barriers to kidney transplants in Indonesia found that the major barriers to kidney transplant in Indonesia were costs, followed by cultural beliefs, perception of the law, lack of information and infrastructure. The study suggested that complex socio-economic, geographical, legal, cultural and religious factors contributed to low kidney transplant rates in Indonesia. Increasing empowerment in nursing in addition to community education programs as well as improving nurses education levels could contribute to the improvement of kidney transplant rates in Indonesia. However, increased kidney disease prevention strategies were required to reduce the prevalence of kidney disease (Bennet & Hany, 2009).

Therefore, the main social determinants related to kidney transplantation are costs, cultural beliefs, perception of the law, lack of information and infrastructure.

ii) Communicable Diseases

Social determinants related to Tuberculosis (TB)

Indonesia ranks third in terms of tuberculosis (TB) burden in the world. Early diagnosis and treatment of TB patients is a foundation of TB control and should be implemented properly in order to achieve the Stop TB Partnership targets of halving prevalence and deaths by 2015. A study on factors that influence health care seeking behavior among TB patients in Yogyakarta found that income and advice from household members or friends were factors that influenced care-seeking behavior. Other factors such as gender, place of residence, and educational level were less likely to influence care seeking behavior pattern among TB patients. Regarding the treatment of TB, most people in the rural areas preferred to seek treatment at private practitioners, while in the urban areas, hospital or chest clinics were preferred. However, whereas the majority of TB patients in rural areas doubted whether TB treatment was free of charge, the urban TB patients had better knowledge that TB treatment was free of charge. Therefore, most TB patients in rural areas took over a month to reach DOTS TB facilities after they started suffering from symptoms (Rintiswati et al, 2009).

However, almost 53% of TB patients who participated in the PPM-DOTS strategy in hospitals were not treated with standardized diagnosis and treatment as in DOTS (Probandari et al, 2010). The Directly Observed Treatment Short-Course (DOTS) strategy has proved a cost-effective strategy to combat Tuberculosis. It consisted of five strategic pillars, included (1) Political commitment; (2) Case detection by quality-assured sputum microscopy; (3) Standardized short-course chemotherapy under direct observation of treatment; (4) Quality-assured drugs; and (5) Recording and reporting system. Therefore to strengthen DOTS implementation in hospitals, individual commitment of health professionals, organizational supports, leadership, and policies in hospitals and national TB programs were very crucial to prevent further transmissions.

Another issue in treating TB patients is adherence. TB patients had to finish and take the medication every day for the duration of six months to be completely cured. If they did not finish the medication within 6 months, they were categorized as non-adherent patients. A study on factors associated with adherent of TB patients concluded that almost half of TB patients did not want to continue the treatment because of feeling better (Widjanarko et al, 2009). Some non-adherent patients stopped the treatment because of feeling worse or experiencing side effects. Over 30% of the non-adherent patients did not get any information from the health care workers about the side effects of the treatment and what to do if and when the side effects occurred. However, many patients were non-adherent due to lack of money. Though the drugs for TB treatment was free of charge, TB patients who resided in rural areas still had to spend a substantial amount of money for transportation to the hospitals in addition to a doctor's fee if they treated in private hospitals. The study suggested that providing health education about duration of treatment

and side effects to TB patients as well as facilitating procedures and reducing costs of transportation would benefit TB patients and reduce non-adherence rates. Improving the quality of health care staff that can provide more friendly services might bring about further improvements in adherence.

In addition to attending the public DOTS services that is provided by the national TB control program, many patients with TB symptoms seek care from the private-for-profit health sector. To improve the quality and high cure rates, WHO recommended a new Stop TB strategy that engaged non-DOTS providers alongside a scale up of the Public-Private Mix DOTS initiative. Nevertheless, the effectiveness of Public-Private Mix DOTS strategy remained unclear. A study in Yogyakarta found that under the specific conditions, private practitioners were cost-effective in diagnosis and treatment of TB in terms of successful treatment of smear-positive cases. However, the most important part of the control program was a well-functioning, public direct observed treatment and short-course DOTS program (Mahendradhata, 2010).

In summary, the main social determinants related to Tuberculosis are delay in diagnosis and treatment as well as low adherence to treatment. There is still lack of knowledge, particular in rural areas, that TB treatment is free of charge. Though the drugs are free of charge, TB patients who resided in rural areas still have to spend a substantial amount of money for transportation to hospitals for treatment. Care seeking behavior is influenced by advice from family and friends but also by income and lack of money for transportation to health facilities. In addition, lack of standardized diagnosis and treatment such as DOTS is still an issue.

Social determinants related to Injecting Drug Users/HIV-AIDS

Young people often engage in high-risk behaviors such as street fighting, unwanted pregnancy, drink, and drug use. A study on the social context of drug use amongst young people in a slum area in Makassar found that there were some young people in the area who employ various forms of self-regulation to control their drug use so that they were not dependent on drugs. They were also not embedded with risk-taking practices and the street culture within their locality, even though they lived in a drug risk environment. Most of them were employees in the informal economy sector, with low-paid jobs that made it difficult for them to achieve the social status that they aspired to, based on masculinity, sociability, and being perceived as 'up-to-date'. Their employment status could give an incentive to controlling their drug use and protecting them from escalating into problematic drug use. The study suggested drug policy should more pay attention to social vulnerability. There was also the need to increase access to employment to potentially decrease the likelihood of problematic drug use amongst young people (Nasir et al, 2011).

Additionally, gendered issues of intimacy and power also played a significant role in influencing someone to consume drug. A study in Yogyakarta found that intimate relationships caused initiation of women's injecting drug use. Women's social circles were very limited to their partners and male friends. When women could not obtain drugs, condoms and clean needles, their male partners and their male friends supplied them with those materials. Therefore, men contributed to women's risk behaviors, such as needle sharing, inconsistent condom-use and not being tested for HIV. The study suggested HIV prevention interventions should involve couples due to the social context of intimate relationships. Since older women who were financially independent gained more control in their lives including safe use and safe sex, it would be beneficial to develop peer-education programs for younger females who inject drugs to develop negotiation skills in safe drug use and safe sex (Lazuardi et al, 2012).

In terms of harm reduction among injecting drug users, a study in Bogor found that a Needle Syringe Program (NSP) was cost-effective to reduce drug related harm among injecting drug users (Susilo & Dunt, 2009). The study estimated 74 cases of HIV infection would be prevented over 12 months, providing cost savings of 25:1, which is for every dollar of resources spent in providing NSP in Bogor, 25 dollars would be saved in costs. The study suggested scaling up and implementing NSP to elsewhere in Indonesia due to reverse the epidemic of HIV. In spite of the high prevalence of HIV among IDUs, the NSP intervention has averted a substantial number of HIV infections among IDUs with an efficient use of financial resources.

The existence of NSP is very important due to access to HIV care and antiretroviral therapy (ART) remained challenge to people who living with HIV/AIDS. Though ARVs have been provided free of charge since 2003, seeking care for HIV/AIDS is still a financial burden to patients. A study in three cities in Indonesia found that HIV care expenditure varied in the different geographical areas. Respondents in Jakarta spent an average of 96% and in Yogyakarta they spent 68% of monthly expenditure for HIV-related care. Most of the money was spent for treating opportunistic infections and medical examinations as well as laboratory tests to monitor HIV infection and treatment. Because almost all of the PLWH were not covered by insurance, they had to spend their treatment from their pocket. Most of the respondents depended on several sources of financial to cover the costs included donations from their immediate family, and selling assets. In contrast, there were low out-of-pocket payments for HIV related care because the government covered medical costs through the local budget and health insurance for the poor. The study suggested the government at central and local levels do not only provide antiretroviral drugs free of charge, but also consider covering HIV care and encourage the social health insurance to cover HIV related care (Riyarto et al, 2010).

In summary, the main social determinants related to Injecting Drug Users/HIV-AIDS are risk-taking practices and the street culture within their locality in a drug risk environment, along with gendered issues of intimacy and power. Income from legitimate jobs was very important to enhance the drug users' social status, to control drug use, and to protect them from escalating into problematic drug use. Seeking care for HIV/AIDS is still a financial burden for patients.

b. On-going Work on SDH

Since there still is no specific work on SDH in Indonesia, this study has tried to find out ongoing programs that are related to SDH. From Internet browsing, we found some ongoing work that has a connection to SDH.

i) Community Health Security (Health Insurance for the Poor)

Community Health Security ("Jamkesmas") is a national program that has been implemented since 2008 as a step forward to universal coverage. Funded by the central government budget (APBN), Jamkesmas is government's commitment to ensure that health care is accessible for the poor. Jamkesmas covers about 76.4 million poor and nearly poor people every year with premium of IDR 5,000 (USD 0.50) per person per month. The central government has spent almost IDR 5 trillion (approximately USD 5 billion) per year since 2008 (Mukti, 2008).

Jamkesmas provides almost unlimited benefit packages for the poor. It covers all services available from the primary care at primary health centers to a more specialized care at referred hospitals when needed. Since 2011, the service is also included maternal care and treatment for patients with Thalassemia Major (Ministry of Health, 2011). However, the beneficiaries are entitled for the third class only at the referral hospitals. They also could not access to some high technology diagnostic examinations, infertility treatment, and supporting instrument such as glasses and hearing aids. Jamkesmas, moreover, covers only drug prescriptions with generic drugs. It also allows hospitals to reimburse using a standard package mechanism only, a case mix system, known as INA-CBGs (Indonesia Case Base Groups).

Although Jamkesmas has significantly reduced financial barriers of the poor to access to health care, there is room for the improvement of the Jamkesmas. One of the most common barriers is transportation cost. In some rural areas, many people have geographical barriers to health facilities due to low distribution of health centers. Whenever there is only one health center available for several villages or even for one sub-district, the patients who live far from the health facilities are more likely to spend travel costs much higher than the user fees that set by the local governments. Therefore, the contribution of local governments in addressing transportation cost is essential to improve health care delivery for the poor (Mukti, 2008).

ii) National Program of Community Empowerment

Based on the fact that poverty and unemployment are the main big issues in Indonesia, the government launched a National Program on Community Empowerment (PNPM Mandiri) in 2007. Poverty in Indonesia is divided into natural poverty, structural poverty, and inequality between regions, while unemployment issues are driven by lack of employment opportunities for the labor force in rural areas. Therefore, the government has developed the PNPM Mandiri in urban, rural, as well as special areas and villages left behind. The program uses a multi-disciplinary approach to empowerment, by combining aspects of awareness, capacity building and empowerment.

In rural areas, PNPM Mandiri aims to improve the welfare and self-reliance of poor people in rural areas. Welfare means the fulfillment of basic needs while self-reliance means the ability to organize themselves to mobilize resources in their environment, being able to access resources outside of their environment, and to manage these resources to address poverty. An example of project activities is to provide loans for women's groups so that they can develop a small business such as handy-crafts, processed food home industry, kiosks, garments, or livestock that can increase family income.

In order to achieve its aims, the PNPM Mandiri develops strategies to make poor households as a target group, strengthening participatory development system, and developing institutional cooperation between villages (Ministry of Internal Affairs, 2008).

PNPM Mandiri also aims to reduce poverty in urban areas in which the poor do not have access to basic facilities or an adequate environment, quality of housing, and in which they face an uncertain livelihood. Therefore, to reduce poverty in the urban areas, PNPM Mandiri develops strategies by strengthening community institutions aimed at creating self-reliance and sustainability, as well as focusing on public policy at the local level, including social, economic and environmental aspects, as well as housing and settlement (Ministry of Public Work, 2011). One of the important works of the urban PNPM Mandiri is neighborhood development by improving slums into livable places.

The PNPM Mandiri was implemented in 33 provinces, 465 districts, and 6,408 sub districts in 2009, while for 2010 it was implemented in 6,328 sub-districts. The reduction of 80 sub districts was due to the number of sub districts that have received the Direct Community Assistance (BLM) for three consecutive years and have consequently been considered independent. The sources of funding for PNPM Mandiri are from the National Budget, Local Budget, Self-Financing and Business.

iii) Nutrition Improvement through Community Empowerment (NICE)

The Nutrition Improvement through Community Empowerment (NICE) is a project lead by MOH to achieve target 2 of MDG 1, by reducing the prevalence of underweight under 5 children from 18,5% in 2007 to below 15% in 2014, and stunting from 36,7% to 32%. The project also aims to accelerate the reduction of prevalence of anemia among children under 5 and anemia among pregnant and lactating women. The Project will support the Government efforts to reduce and prevent malnutrition of about 1.48 million under five children and anemia among 500,000 pregnant and lactating women (Ministry of Health, 2010b).

The NICE is an ADB loan to finance activities in about 1,800 project villages in the province of North Sumatra, South Sumatra, West Kalimantan, NTB, NTT, and South Sulawesi. This program was initiated on 10 December 2007 and will expire on 30 September 2012. The loan amount is SDR 32,588,000, with the Directorate General of Public Health's Department of Health as the executing agency (Ministry of Finance, 2008).

According to the Ministry of Health (2010b), the NICE Project is designed to deliver five specific outputs; 1) Strengthened capacity for the development of nutrition policies, programs and surveillance; 2) improved quality and integrated nutrition services for women and children in the project areas; 3) enhanced community capability for and implementation of nutrition, hygiene, and sanitation intervention; 4) expand food fortification programs and strengthened nutrition communication; and 5) enhanced capacity for project management including planning, monitoring and evaluation of nutrition programs.

iv) USAID Indonesia Urban Water, Sanitation, and Hygiene Project (USAID IUWASH)

USAID IUWASH is a US\$33.7 million program to expand access to clean water for two million people and improve basic sanitation for 200,000 people in at least 50 urban areas. This five-year program that was launched in 2011 works in partnership with the Government of Indonesia, the private sector, and civil society. The program is just one component of the United States' environment and health programs in Indonesia which currently assists 34 water utilities to increase access to water services by helping improve the water utilities performance and energy efficiency (USAID, 2012).

The expected results of the project are to reduce by 20% the water costs paid by the poor, to improve access to safe water for 2 million people, and to increase sanitation for 200,000 people. This project would become mainstream models for providing clean water and sanitation to poor people in urban areas in Indonesia.

In summary, on-going works on related to social determinants of health in Indonesia are community health security ("Jamkesmas") to ensure about 76,4 million poor people have

access to health care facilities; National Program on Community Empowerment (PNPM Mandiri) to guarantee poverty reduction based on community empowerment programs; Nutrition Improvement through Community Empowerment (NICE) to achieve target 2 of MDG by reducing the prevalence of underweight under 5 children and stunting; and USAID Indonesia Urban Water, Sanitation, and Hygiene Project to expand access to clean water and improve basic sanitation people in urban areas.

c. Social Determinants of Health Policies and Forthcoming Policy Reviews

Indonesia does not have any specific regulation on social determinants of health. Most regulations are SDH-related issues such as health law, national social security system law, social security administrative law, and other regulations associated with smoking.

i) Law No. 36/2009 on Health

This law consists of regulation on health in general. Related to smoking, this law regulates advertising, promotion and sponsorship of tobacco products, smoke free places, and packaging and labeling of smoked tobacco products. However, some articles on this law have been legally reviewed. One example is removal the word “can” in an article that regulates places for smoking, so that providing special places for smoking inside the building in the workplaces and public places is not an option anymore. Rather, the government or the owner of the places *should* provide it.

An important over-riding policy feature relating to SDH concerns the budget allocated to the health sector. According to this law, at least 5% of the total national budget is supposed to be assigned to the health sector, but it currently receives just 3.4% of the national budget. Of this 3,4%, the Ministry of Health is allocated 2,1%, and other Ministries and institutions receive the remaining 1,3%. The fact that non-health sector institutions receive a significant proportion of the health budget indicates that the government recognizes the important role of these other sectors in promoting health. However, it is worrying that the overall sum allocated for health is just 70% of the amount that it is supposed to be, as stipulated by this law.

ii) The Government Regulation No. 19/2003 titled “Making Cigarettes Less Harmful to Health”

The Government No. 19/2003 stipulates that (WHO, 2011c):

- Smoke-free zones include health facilities, working places, educational facilities, prayer places, public conveyances and public places.
- One specific health warning in textual form should be displayed on tobacco packages. It also states that the message should be displayed conspicuously on the label part of the packaging in a clear and easy-to-read way on one of the largest panels of the cigarette package, with a size no less than 3 mm in height.
- Tar and nicotine content of cigarettes must be disclosed.

- Cigarette producers and importers cannot conduct any promotional activity by giving away cigarette samples as free gifts or by giving other free non-tobacco products branded by cigarette labels.

iii) Law No. 32/2002 on Broadcasting, Law No. 40/1999 on Press, Law No. 33/2009 on Film – related to smoking

These laws regulate advertising, promotion and sponsorship of tobacco products, including limitation of advertorial time for tobacco products in the television.

iv) Law No. 40/2004 on National Social Security System (Sistem Jaminan Sosial Nasional or SJSN law)

The national social security system is comprehensive programs of government with the final goals to:

- Ensure all people in Indonesia get access to health care facilities whenever they are sick.
- Guarantee all elderly have monthly pension until they die.
- Ensure all children who have no parents prior to pension age, get pension income until they are empowered economically.

v) Law No. 24/2011 on Social Security Administrative Bodies (Badan Penyelenggara Jaminan Sosial or BPJS law)

- This law was established as a mandate of Law No. 40/2004 (National Social Security System)
- The central government will cover all Indonesians in the new social protection program for five benefits - health, pension, old-age savings, death benefits, and worker accident.
- The law will create BPJS Kesehatan as a single state entity in 2014 that will cover health care. Those with a regular income will have to pay monthly premiums, while the government will pay premiums for people who are poor or unemployed.
- In 2015 a second BPJS (BPJS Ketenagakerjaan) will cover life insurance, work accident insurance, civil service pensions and old-age pensions.
- The BPJS Law is going transform current administrators, PT Askes and PT Jamsostek, from state owned enterprises to public legal entities.

In summary, there exist regulations in Indonesia on SDH-related issues such as health law, national social security system law, social security administrative law, and other regulations associated with smoking. Most of them relate to the government efforts to improve the quality of life of the poor.

7. Stakeholder Interviews

This section presents the results from interviews with 15 key informants from different policy levels. The results of the interviews are compiled into 12 specific themes, as follows:

i) Understandings of the term Social Determinants of Health (SDH)

This question was designated only for decision makers within the health sector at national and local level. All of them could explain the meaning of Social Determinants of Health, although their interpretations are not perfectly the same as the definition of SDH according to the Commission of SDH. Most of them stated that SDH are always related to environment and behavior.

“... various activities or efforts outside the health sector that are related to social factors which could enhance health or have an impact on health status” (Ministry of Health adviser, male, Jakarta).

“... factors that have been identified as environmental aspects of health-related behavior” (Central Java provincial health office staff, male, Semarang).

“Social background affects one's health, that is how the social environment and how the strata social affect a person's health status” (Yogyakarta provincial health office staff, male, Yogyakarta).

Nonetheless, an NGO activist gave an interesting answer when the interviewer tried to find out another perspective of the understandings of SDH. She mentioned about the importance of the policy decision-making process that can influence someone's health.

“Someone's health cannot be determined only by individual factors but it is also affected by environmental conditions in which someone lives, included social, economic, and political factors that incorporate with policy decision-making that can determine someone's health” (Perkumpulan IDEA staff, female, Yogyakarta)

According to the respondents, the term ‘Social Determinants of Health’ has never been used in their daily work activities, although they have worked on the issue for several years.

“Actually, we already work on social determinants of health, but it may not be a specific determinant of health. At least the way of our thinking indicates that we are to do so” (Yogyakarta provincial health office staff, male, Yogyakarta).

“The concept of SDH has long been implemented because we do a lot of advocacy with non-health sectors” (Minister of Health adviser, male, Jakarta).

“We do not much use the term SDH” (Central Java provincial health office staff, male, Semarang)

ii) Views on organizational vision for SDH and the engagement on SDH by the government

Regarding the organization's vision, none of the informants representing donor agencies and NGOs said that SDH is listed on their organization's vision explicitly. International donor agencies have a broader vision on health rather than just social determinants of health. Nonetheless, two local NGOs that work outside the health sector mentioned the principle of health in their organization's official vision document.

“Explicitly, we have not been formulating anything about it (SDH), but the principles of health is mentioned in our official document” (Perkumpulan IDEA staff, female, Yogyakarta).

“... where the community, government and business work together without any domination, to achieve a healthy and equitable economic-, social-, and cultural politics for the Indonesian society” (Satunama Foundation staff, male, Yogyakarta).

Related to the engagement of the organization's vision to the Indonesian government and other organizations, all of the informants reported that they have their own networks, partners and affiliations to government-related institutions and other organizations. Perkumpulan IDEA for example, in addition to work closely with the local community to advocate the local government, also exchanges information with other NGOs in the country that work in budget observation. Perkumpulan IDEA is a local non-governmental organization that educates the community to participate actively in the proses of budget development of the local government and monitor the delivery service of the programs. Satunama, another local NGO that engages in empowering community in the field of economy and education also work closely with other NGOs, related government institutions and business entities.

At national level, Indonesian Public Health Association (IPHA) and National Epidemiology Network (JEN) as professional organizations always advocate the government with their expertise and experiences. As a rainbow coalition, IPHA has made collaboration with the government through advocacy based on strong public health evidence. Moreover, JEN has integrated health activities by inter-sectoral collaboration between the health and non-health sectors.

Meanwhile, international donor agencies have always assimilated their assistances with the priorities of the government of Indonesia. Most of them use partnership with local counterparts that consist of government, universities and NGOs.

“AusAID in developing programs based on partnerships, assistance in the form of grants and technical assistant should be in line with the priorities of the government of Indonesia” (AusAID expert, male, Jakarta).

“The approaches depends on the specific issue, such as tuberculosis or avian influenza or maternal and neonatal. Those are the starting point for us to work with the government

about government’s strategy around the maternal neonatal or avian influenza or tuberculosis and then we look at our program align on it” (USAID expert, female, Jakarta).

iii) Identification of the most important SDH in Indonesia along with sectors and the main actors involved

This question was asked of all respondents except decision makers outside the health sector. The informants gave various answers on what are the most important SDH in Indonesia. The Indonesian Public Health Association and Perkumpulan IDEA indicated that the most important SDH in Indonesia is policy. The policies taken by decision makers will greatly influence the actions to improve the health and lives of many people.

“... policies in the health sector and regulatory outside the health sector that support the interests of the health of individuals, families, communities and society” (Public health expert, male, Jakarta).

“People can have enough money to be able to access any health services and education, but if not then there must be a policy of supporting their access to services (Perkumpulan IDEA staff, female, Yogyakarta)

Meanwhile Muhammadiyah, the second largest faith-based organisation in Indonesia and Central Java Province Health Office mentioned culture as the main point, and Satunama Foundation suggested clean water as the most essential SDH. A Health Minister’s adviser declared health financing and human resources as the main issue, whilst AusAID indicated poverty and policies are the most significant SDH. USAID and WHO mentioned poverty and access to health services as the main issues. IDRC, likewise, indicated poverty along with gender as the main SDH problems in Indonesia.

“The important social determinants of health, example for TB and also poverty, are very broad. Such as for instance, how people access the health services, what information they have and so on” (USAID expert, female, Jakarta).

“... poverty remains a dominant determinant ... and ... many policies that are not based on the evidence” (AusAID expert, male, Jakarta).

“... two things, the first is poverty that has a significant effect to health and the second is gender that has often been forgotten though it is very important issue...” (IDRC expert, female, Singapore).

“... the most important social determinant of health in the area of social visit, composed of poverty, the health services utilization, in addition to mal-nutrition, mortality rate...” (WHO expert, male, Jakarta).

The WHO expert for Indonesia was also concerned about decentralization as one of the most important SDH in Indonesia. He suggested viewing decentralization as an opportunity rather than a problem.

“... because of decentralization, I don’t say that this is a problem only, but it give us opportunities as well ...” (WHO expert, male, Jakarta).

However, all informants agreed that SDH is not only the responsibility of the Ministry of Health but it is also responsibility of related technical sectors. For example, the Ministry of Public Work has the responsibility to provide clean water in collaboration with local government and the Ministry of Social Affairs. The Ministry of Finance, furthermore, is responsible for preparing and allocating budget along with the distribution of the budget. Thus, the involvement of the different sectors is very closely linked to the question at hand.

“Obviously, different sectors are involved on SDH. When it comes to poverty, we talked to the environmental, social, agricultural science and forestry” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

“For the health sector, the collaboration with other sectors depends on the issue. Food intake, for example, the Ministry of Health should work closely with the Ministry of Agriculture, the Ministry of Marine, and the Ministry of Trade that continues to take care of the food availability, food quality, and food safety” (Perkumpulan IDEA staff, female, Yogyakarta).

iv) Important issues of SDH that are currently not being address

When NGOs, Donors, and the WHO representative were asked about important SDH issues in Indonesia that are not being addressed, various interesting responses came up. A Muhammadiyah Board member and a Satunama Foundation staff indicated access to health facility was the most critically unaddressed SDH in this country. Muhammadiyah was specifically about adequate infrastructure, especially transportation, whilst Satunama was alarmed that the poor could not access the health facilities due to identity issues.

“Health care workers do actually not need to discriminate anyone, whether he has a local ID or not. It is sometimes a local government’s ego to facilitate only those who have the local ID while those who do not hold the local ID will not get access to health care, although they are very poor and really need the service” (Satunama Foundation staff, male, Yogyakarta).

The people’s rights to health were said to be down played because of other political interests, particularly related to economic mechanism.

“The rights of Indonesian people on health can be easily removed under the name of economic savings with the main interest of work-force and unemployment” (Perkumpulan IDEA staff, female, Yogyakarta).

It is not surprising that poverty is the most challenging issue because it is a structural and inter-sectoral problem. Because poverty is very complex, it needs very comprehensive actions to reduce it. Therefore, many government institutions are involved in poverty

reduction through developing pro-poor programs under the coordination of coordinating ministries.

“Because poverty is an inter-sectoral issue, institutions with coordination function such as Menkokesra (the Coordinating Ministry of People’s Welfare) and Bappenas (National Bureau of Planning) will play an important role in coordinating the pro-poor programs among government institutions” (AusAID expert, male, Jakarta).

Nonetheless, the AusAID expert also explained that due to accelerated poverty reduction, the government introduced a new institution that focuses on poverty reduction, namely the National Team on Poverty Reduction Acceleration (TNP2K) that is managed directly by the vice president office.

Related to gender issues, IDRC expert mentioned that gender is somewhat more complicated, although funding for gender is very small compared to poverty. Moreover, gender is always associated with women and reproductive health. Consequently, gender-oriented development just revolves around these issues. The statement that gender is an important issue that is not being addressed was supported by the USAID expert.

“About gender issues, I think it has not complete support yet. Because Indonesia is such a big country and so diverse, so gender issues are dealt with so differently. So, gender is big issue” (USAID expert, female, Jakarta).

Yet, the government officers gave different perspectives when this question was discussed with them. A senior adviser for the Ministry of Health claimed that budget allocation for health, from an SDH perspective, is difficult to manage. This is because the budget for the health sector then needs to be not only allocated in the health ministry, but also in other ministries and government agencies. The use of the budget that is outside of the health ministry is difficult to be controlled. Moreover, allocation and approval of the budget are in the hands of the finance minister.

Different responses to this question were also given by two local government officers. One stated that education is the most crucial SDH, while another indicated culture as the main issue.

“Although the majority of Yogyakarta people are not illiterate, the level of education among its population is still low. The lower the educational level, the lower understanding of health problems” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

“Culture of mutual cooperation has become part of the family, and the neighborhood. In the past, when talking about mutual cooperation, we discussed for only physical activities and money, but now mutual cooperation is identified with thoughts and prayers as well as money and physical activities” (Central Java Provincial Health Office staff, male, Semarang).

v) *Facilitating meetings of researchers and decision makers on SDH*

There is a lot of good health research in Indonesia. Unfortunately many of these results are simply stored in the library without being able to be optimally utilized by policy makers. According to the adviser of the Ministry of Health, the policy makers need real evidence, something that has been established, not just aspirations.

“We need to develop an evidence-base that has close relationship to the policy makers so that they know whether the decisions they take are indeed based on the evidence” (Ministry of Health adviser, male, Jakarta).

Nevertheless, many health researchers use technical language, which cannot be understood by the decision makers. Most of them also conduct research without considering any policy implications. Thus, advocating for their results, and routine communication with policy makers are necessary to achieve understanding between the two groups, especially when they have a different level and type of education.

“... researchers should not do just research for research only, but do research to support policy ...” (WHO expert, male, Jakarta).

“The way the results are suggested by researchers to government is less precise because no one has the same understanding of health” (Central Java Provincial Health Office staff, male, Semarang).

“Different level of education resulted in different perception of results from health research. Some local parliamentary members are only educated high school. Therefore, researchers and policy makers need to sit together to discuss the findings and share understandings of the issues being discussed” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

vi) *The importance of SDH from the political perspective*

All informants from donors and the government agreed that SDH is very important politically, though they gave different examples, such as the implementation of TB control and the building of a new hospital.

“The implementation of TB control has been almost 30 years in Indonesia. This is a success but it is only a small success, not a great success” (Ministry of Health adviser, male, Jakarta).

“DPRD Yogyakarta Province has planned to build a hospital without class for the poor, though Yogyakarta Province already has 64 hospitals with 4.900 beds for 3,5 million residents of Yogyakarta. It has exceeded the WHO standard in which the numbers of beds for 3,5 million population are only 3.500 beds” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

Additionally, during the local election campaigns, many politicians sell pro-poor programs to attract public sympathy. The most common commodity was free health care treatment for the poor and free education for children. However, since the government enacted law No.

24/2011 on Social Security Administrative Bodies as a mandate of law No. 40/2004 on National Social Security System, the central government will cover all Indonesians' health care, starting in the beginning of 2014, and then following by pension, old-age savings, death benefits and worker accident that are going to be started in 2015. Thus, health issues are not exciting any longer for the politician candidatures.

“Next year, health issue is not so sexy anymore for the politicians because the financing is covered mostly by the central government. So, they need to explore something else outside of the health sector but it should has a big impact on health” (Central Java Provincial Health Office staff, male, Semarang).

vii) Knowledge of policies that have implications for the SDH and that are scheduled for review.

Almost all respondents stated that the law on health (law 36/2009) has a big implication for the health sector in Indonesia. An informant from AusAID Jakarta indicated that the majority of laws and regulations are addressing issues of poverty. These include laws on the national social security system as well as the law on health, and that are really to ensure health for the poor.

Regulations related to tobacco control are still the hot issue in Indonesia. Most of the decision makers at national and local levels argued that the draft of government legislation on tobacco would have a significant implication to the tobacco control in Indonesia, though several provinces and districts have implemented a smoke-free area regulation in their territories.

“We do not have legislation on smoke-free zones (KTR), but we have a regulation on air pollution in which one of the verses regulate non-smoking area” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

Some donors also mentioned laws related to the implementation of social security that have affected to application of the universal coverage. According to the adviser of the Ministry of Health, some other regulations would be adjusted due to the implementation of the new BPJS law (Social Security Administrative Bodies).

“Regulations to be reviewed was related to BPJS, such as Social Security law and Labor Law will be revised as we implement the National Social Security System” (Ministry of Health adviser, male, Jakarta).

Interestingly, earmarked tax from tobacco excise revenue was also associated with SDH and it needs to be updated regularly.

“... earmarked tobacco excise revenue is set up by the Ministry of Finance and the Governor. We are up to date what is necessary, mainly operational definition needs to be seen again, because it's not just a conceptual context” (Central Java Provincial Health Office staff, male, Semarang).

viii) Involvement in policy review and the need for evidence

According to a SDH expert in Indonesia and a member of the National Epidemiology Network, Indonesia does not have any specific policy on SDH. Most of the documents are only SDH-related policies. Yet, he agreed with the readiness of appropriate data to support decision makers in making the right decisions.

“... there is a need of document saying that this is the gap and this factor must be dealt with” (National Epidemiology Network expert, male, Jakarta).

Nonetheless, when decision makers were asked for this question, all replied that their involvement in the policy review was because of that the issues are related to their main job.

“When it is linked to my core responsibility on financing policy and community empowerment, then I would be involved (Ministry of Health adviser, male, Jakarta).

“As a head of the provincial health office, I obviously joined the team, such as poverty eradication team and healthy city team” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

“I am involved in developing the concept of Primary Health Care services. I am also involved in the formulation of the use of the earmarked tax of tobacco excise revenue” (Central Java Provincial Health Office staff, male, Semarang).

To support the decision maker’s positions in reviewing the policy, they need appropriate data and evidence regarding policies that are likely to be effective and cost-effective.

“... the real facts on the ground are really important. Please do not talk about draft of government regulation on tobacco in Temanggung (district of tobacco production) when discussing about restriction. We have to talk about the setting, not about the restriction” (Central Java Provincial Health Office staff, male, Semarang).

“We need to study and review the implementation of the health programs. We have to look back whether the health programs are already on track and appropriate” (Ministry of Health adviser, male, Jakarta).

“We already prepare the health data, such as the maternal mortality rate in Yogyakarta” (Yogyakarta Provincial Health Office staff, male, Yogyakarta).

As a health professional organization, moreover, the Indonesian Public Health Association (IPHA) is also involved in reviewing policies at national and local level. Their work includes, but is not limited to reviewing the health system, the preparation of the state budget, and

reviewing policies related to climate change issues. It is not surprising that IPHA has a significant contribution to the review of such policies since its members consist of experts in the particular areas. Most of the experts are from the universities and research centers nationwide. In conducting reviews and giving advice to the government, the IPHA experts use proper and relevant evidence based on results from global and localize research.

In addition to decision makers in the health sector, NGOs outside the health sector are also involved in the process of making important decisions related to health. Satunama Foundation for instance, was involved in discussions about the health care facility issue for people living with HIV/AIDS in Surabaya and Malang, East Java Province. Their involvement in the discussion was related to their programs in those areas.

“We have been involved in discussing health care issues because it is associated with our program in HIV/AIDS in the districts. Before attending the discussions, we prepared data on the number of cases, lists of complaints about access to health cares or health centers, as well as data on the most at-risk populations” (Satunama Foundation staff, male, Yogyakarta).

With proper data on hand, Satunama Foundation felt more confidence to speak up and offer solutions to the problems during the meeting. The government counterparts also felt happy with the availability of such data which could be used an evidence to make a decision.

ix) Success stories on SDH

Every informant told interesting success stories about activities related to SDH. Some of the respondents had been involved directly in these success stories but others just knew about them from reports or colleagues. One example is the Satunama Foundation in Yogyakarta, that succeeded in empowering carrying herbal medicine communities in Gunung Kidul (communities of mothers who sell the liquid of herbal medicine in the bottles in which they put the bottles in a basket and carrying it on their backs) to get access to finance and land for planting the raw materials of the herbal medicine. With the assistance of Satunama, the communities developed cooperatives to facilitate its members with loan and savings activities as well as assistance to get loan from the bank. As the result, their lives are getting better and are now slightly above the poverty line. They could also spend the money on better education and better health.

Another success story on empowering communities was the improvement of budget allocation for nutritious food intake in Yogyakarta. Perkumpulan IDEA has supported communities in Bantul, Gunung Kidul and Kulon Progo districts in Yogyakarta Province to know their rights for getting a better health for their children. The communities developed proposals for the provincial office and were actively involved in discussions on planning and development meetings from the village level to the district level. Perkumpulan IDEA has

encouraged the communities to participate actively not only in the process of budget planning but also in the process of monitoring and evaluation.

Another success story about malaria becoming an occupational disease – i.e. a disease associated with the work place – was told by an adviser for the Ministry of Health. He explained that at the beginning, malaria was considered as a common disease. He tried to include malaria as an occupational disease, and he therefore spoke to the Ministry of Labor and gave a lot of knowledge about it. Finally, since 2007 or 2009, there was a change, in that malaria has become one of occupational diseases and it has become included as a workplace health issue.

An AusAID staff in Jakarta shared a success story on improving coverage of TB and immunization in an area that had a lot of limitations in Central Sulawesi in the 1990s. Together with his colleague, he developed an effective community empowerment program, namely community-based TB program and community-based immunization program. With these programs, the poor district with limitations in infrastructure and low education could improve TB and immunization coverage significantly. The district reached a very good TB case finding with a high cure rate that exceeded the national target.

x) Health impact assessment

None of the local NGOs reported that they had ever conducted health impact assessments in their projects. In addition to the fact that most of their projects were not related directly to health, their limited understanding on the health impact assessment meant that they never considered it necessary to conduct such assessment. After getting a brief explanation on what health impact assessment is, they were interested in conducting one, particularly when doing monitoring and evaluation of the projects.

In addition, not all NGOs at national level had conducted health impact assessment on the projects they had. They usually conducted the assessment when they were asked to do so.

“We conducted health impact assessment, especially to evaluate the specific programs requested by the Ministry” (Public Health expert, male, Jakarta).

xi) Recommendation for SDH

This was a general question discussed with every informant except the decision makers' outside the health sectors. All respondents gave interesting recommendations for better implementations of SDH in Indonesia. One proposed healthy public policy as one of the best solutions to ensure that every sector pay attention to the implication of its policy to public health whenever they endorsed the policy. He also mentioned that the presence of institutions or forums that assess the implication of existing policies to health is needed.

“I think how to assure healthy public policy is to perform forum or institutions that conduct studies on existing policies and measure its impact on health. The results are then used to make recommendations for the sectors that issued the policy” (AusAID expert, male, Jakarta).

Some other informants believed that inter-sectoral collaboration should be improved. Nonetheless, there is a concern that the coordination across sectors would create an additional bureaucracy. This is because inter-sectoral collaboration needs more coordination between departments and it would extend the chain of bureaucracy. Bigger organization means a longer bureaucracy chain.

“We have to be careful to work across sectors because it could generate additional bureaucracy through further coordination within the department. Therefore, it should be clear the task of each department and how the collaboration that is given” (IDRC expert, female, Singapore).

“The involvement of all organizations in the activities should be integrated and it should be based on their potential” (Muhammadiyah board member, female, Jakarta).

“There should be always a solid single document stating the current situation on every social determinant of health in Indonesia and it must be linked with other sectors” (National Epidemiology Network expert, male, Jakarta).

Yet, the keys for every effort to fulfill human rights are the national policies. These include prevention efforts that should be appearing in the health law.

“The standard used in the development of national health policies should be human rights, not the others. So please, do not bring economic interest and political interest whenever developing the policies” (Perkumpulan IDEA staff, female, Yogyakarta).

“... preventive dimension is not much seen. It does not appear in the law of health (Law 36/2009 on Health)” (Satunama Foundation staff, male, Yogyakarta).

Economists and development experts also talked about the Human Development Index (HDI). There are three main things in the HDI, namely health, education, and welfare. They are interrelated and integrated with each other. Health will affect education, and education will affect health. Health and education will increase welfare and welfare will affect health as well as education.

“If the principles of human development index are back and forth, the nation’s problems of this country will be solved. The idea can be from any department” (Public Health expert, male, Jakarta).

He suggested to interpret regulations on the basis of their impact on health. In the educational law for example, the definition of education should be added with the statement for improving the human development index. On this basis, the schools teach

their children to be healthy and educate them to becoming agents of change from every household for the interests of health and entrepreneurship. Schools must prepare themselves to be a healthy school.

“So it should not be that education is defined only by giving multiple subjects and making children multiply cognitive, but that they do not want to provide skills for life. Skills for life are a skill to stay healthy and skills to be more economically prosperous (Public Health expert, male, Jakarta).

xii) Recommendations for publications related to SDH

None of the informants had any publications on SDH at the time of interview, and most referred to the WHO Commission Report. They suggested using search engine on the Internet to find proper publications on the SDH. Among others, Public Health expert and National Epidemiology Network expert shared their collections of articles and reports on SDH to the ISS Indonesia who was interviewed them.

However, the National Epidemiology Network expert conducted research on SDH last year but the result is not published yet. He is writing two books about SDH right now and he hopes that the book will be ready at the end of this year.

In summary, the interview results inform us that the term ‘social determinants of health’ is not widely known in this country, although most informants have already implemented it through their actions for several years. SDH is also not listed on their organization’s vision explicitly. The main SDH issues in Indonesia are policy, poverty, health financing, human resources, low education, culture, decentralization and access to health care services. All informants agreed that SDH is not only the responsibility of the Ministry of Health but it is also responsibility of related technical sectors. Therefore, advocating and routine communication are necessary to get the same perception between researchers and decision makers, in order to develop healthy public policy in all sectors.

8. Conclusions and Recommendations

This study aimed at providing a situation analysis for Indonesia, focusing on; i) Current SDH-related training in Indonesia, and gaps identified, ii) The core SDH issues of concern in the country, and iii) Ongoing SDH-related work in Indonesia.

This final section summarises the main conclusions that can be drawn from the study, and brings up some recommendations that can be given based on the study findings.

a. Main conclusions

- Indonesia is a country with great disparities, geographically, demographically, and economically. The estimated 237 million populations live on 6,000 islands which are surrounded by more than one hundred active volcanos. The country has a presidential government system, which has been decentralized so that much power to govern is in the hands of district/city. Since the effective development and implementation of all policies depends on the capability of the heads of districts, these conditions have influenced the health of the Indonesian people, and have also brought about health inequity in Indonesia. Nation level data and regulations are not enough to effectively address SDH, but rather data and interventions are needed at district level.
- Issues related to **tobacco use** are major SDH in the country. Indonesia does not have strict regulations regarding tobacco control and has not ratified the Framework Convention on Tobacco Control (FCTC). Cigarette advertising and tobacco sponsorship in sports and performing arts are very massive. People smoke everywhere and anytime even inside their houses, which results in increasing numbers of passive smokers. Consultation to quit smoking is still very rare, both in clinics and in health centers. Smoking cessation techniques and consultation has also not been taught in the medical schools.
- Indonesia ranks third in terms of **tuberculosis (TB) burden** in the world. This study found the main social determinants related to TB to be delay in diagnosis and treatment as well as low adherence to treatment. There is still lack of knowledge, particular in rural areas, that TB treatment is free of charge. Further, even if the drugs are free of charge, TB patients who reside in rural areas still have to spend a substantial amount of money for transportation to hospitals for treatment. Care-seeking behavior is influenced by advice from family and friends, but also by income and lack of money for transportation to health facilities. In addition, lack of standardized diagnosis and treatment such as DOTS, is still an issue.

- There is some **on-going work related to social determinants of health** in Indonesia. The Community health security (“Jamkesmas”) program aims to ensure that about 76.4 million poor people have access to health care facilities; the National Program on Community Empowerment (PNPM Mandiri) intends to guarantee poverty reduction based on community empowerment programs; and the Nutrition Improvement through Community Empowerment (NICE) plans to achieve target 2 of MDG 1 by reducing the prevalence of underweight and stunting among children under five years of age. In addition, the USAID Indonesia Urban Water, Sanitation, and Hygiene Project aims to expand access to clean water and improve basic sanitation people in urban areas.
- When it comes to training on the SDH, this study show that Social determinants of health are not taught as separate subjects in the public health schools in Indonesia. However, some courses include topics related to SDH as part of the courses, such as “Health Policy” at FKM-UI, and “Social and Behavioral Science” in Public Health and Priority Health Problem at IKM-FK-UGM. In addition, most public health schools include SDH-related components that could be further developed.

b. Recommendations

For policy makers:

- In order target the SDH-related to smoking this study revealed a need for:
 - o Training on smoking cessation counseling among health professionals, as well as raising awareness of the importance of routinely asking their patients about their tobacco use and offering practical advice on how to quit smoking.
 - o Framing tobacco use as a family health issue and an action to caring for one’s family as the best way to encourage a nonsmoking norm in the home.
 - o Increase restrictions on the tobacco industry, such as advertising bans, clean air legislation, and price and tax actions.
- In order to target the social determinants related to TB, there is need for reducing the costs of transportation, which would benefit TB patients by reducing non-adherence. Improving the quality of health care staff in providing more friendly services might further improve treatment adherence.
- Although there is ongoing SDH work in Indonesia that has reduced financial barriers of the poor to access to health care (“Jamkesmas”), there is still room for improvement. One of the most common barriers is transportation cost. In some rural areas, many people have geographical barriers to health facilities due to low distribution of health centers. Whenever there is only one health center available for

several villages or even for one sub-district, the patients who live far from the health facilities are likely to face travel costs much higher than the user fees that are set by the local governments. Therefore, the contribution of local governments in addressing transportation cost is essential to improve health care delivery for the poor.

For INTREC:

- Intensive and more structured training on SDH is needed in order to ensure a good understanding of SDH in Indonesia among key research and policy stakeholders. There are currently no SDH-specific courses available, although SDH-related topics are included in some of the existing courses at the public health schools. INTREC could contribute by developing specific SDH courses targeting students and researchers, as well as NGOs and policy makers. The SDH training might not necessarily be conducted in the conventional way through face-to-face meetings in the classroom, but could equally be run via the Internet. Such online SDH training could take the example of the health policy research training, which is already being provided by the CHSM FK UGM. Regarding Internet access, approximately 55 million Indonesians had access to the Internet at the end of 2011. Therefore, online training on a specific topic such as SDH would be very possible to implement on a nationwide basis in Indonesia.

- There is a need for researchers and policy makers to meet to discuss evidence on SDH and to share understandings on how to address these issues. To support the decision maker's positions in reviewing the policy, there is a need for appropriate data and evidence from district level. One contribution from INTREC could be to support the development, spread and use of relevant data on the SDH from regional settings.

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Annex 1 – Table of SDH-related courses

1. Universitas Indonesia

a. Course provided and course description

The subjects identified are divided here into 3 categories: (i) Social Determinants of Health subjects; (ii) Subjects with an SDH section; (iii) Subjects with SDH-related component.

i) Social Determinants of Health Subjects

None

ii) Subjects with SDH Section (explicit)

- 1) *Health Policy (mandatory of Majoring in Health Economics, Majoring in Health Insurance, Health Policy, Health Service Management, Pharmacoeconomics, Law & Health Policy).*

This course discusses topics concerning the determinants of global health, components and interconnections between the components of the health care system, various systems and determinants of health services, resources in the health care system, health care provider organizations, economic support and management in health services, health services administration, and decentralization in the administration of health services in Indonesia.

iii) Subjects with SDH-related Component (implicit)

- 1) *Intermediate Public Health (mandatory of faculty)*

This lecture discusses about theory, concept, public health method, and the application of the theory and the concept to solve public health problems.

- 2) *Intermediate Biostatistics (mandatory of faculty)*

This lecture studies about descriptive and inference statistics concept with its application in health, probability concept and its application in health, presentation and analysis of univariate and bivariate data, statistical analysis techniques and statistical tests of various kinds of data.

- 3) *Intermediate Epidemiology (mandatory of faculty)*

This course discusses the history of the development, scope, and uniqueness of the epidemiology, descriptive epidemiology, hospes relation, environment, disease agents, disease classification, the basics design of epidemiology, surveillance theory, epidemiological research, and analysis of simple quantitative. Those are provided through lectures and practicum to apply the principles and methods of epidemiology.

- 4) *Research Methodology (mandatory of study program)*

In this subject, students are given an understanding of a wide range of customized research design in the achievement of research goals. The discussion includes the identification and formulation of the problem, hypothesis formulation,

operationalization of hypotheses, research subject, the basics of instrumentation and measurement, validity and reliability in health research, research design (survey, case control, cohort, experiments), and the basics of data management

5) *Introduction to Health Economics (mandatory of Health Economics, Health Insurance, Health Policy, Health Service Management, Pharmacoeconomics, Law & Health Policy)*

This course explores the application of economics in the health sector. The principles of efficiency, equity, and sustainability become area of the study. It is in line with the philosophy of resource scarcity and health principles of investment and community rights. This lecture discusses the relationship between health and economic development as well as economic losses due to health problems, elasticity, supply and demand of health services, health financing and equity concepts.

6) *Economic Evaluation in Health Program (mandatory of Health Economics)*

This course discusses the purpose and principles of macro and micro evaluations, normative standards which include health is a fundamental human right, democracy, equity, efficiency, sustainability, affordability, and accountability. Logical framework to answer why the need for evaluation, clarification and characteristic health program from an economic standpoint are also being explored, included criteria for program evaluation such as effectiveness, efficiency, adequacy and equity, the evaluation of equity, sustainability issues, CEA, CBA, cost estimating, discounting, compounding, valuing benefits, ATP / WTP, shadow price, NPV, IRR, opportunity cost and health accounts.

7) *Strategic Leadership and Systems Thinking (mandatory of Health Economics, Health Insurance, Health Policy, Health Service Management, Pharmacoeconomics, Law & Health Policy)*

This course provides insight, technical skills of strategic leadership by using systems thinking and the ability to make changes through increasing personal mastery and always review the use of mental models, communicating through dialogue and discussion, and influence people through a shared vision and team learning, and technical skills in finding the root of the problem.

8) *Health Care Financing (mandatory of Health Economics)*

This subject is focused on how to design finance in health services and its application through exercises and case studies.

9) *Social Security (mandatory of Health Insurance)*

This course discusses various risk management concepts underlying the welfare system and social security. Basic principles of social security programs that are included in the ILO conventions and various models of the social security administration for the various programs in various countries are also discussed.

10) Health Policy Analysis (mandatory of Health Policy, Law & Health Policy)

This course analyzes the development of health policy at the provincial and city level. The linkage between the ultra system, supra systems, health systems and its sub systems in a region due to the development of public health policy will be examined. The discussion focused on the experiences of health services in facilitating and adopting technical policies that are directed by the department of health along with the development of public policy that is directed by local governments.

11) Health Policy-Making (mandatory of Health Policy, Law & Health Policy)

This course provides an understanding of the process of making a policy with attention to the strategic aspects related to economic, political, social, cultural, legal, and alignments.

12) Human Resource Management (mandatory of Health Service Management)

This course discusses the philosophy, planning and workforce management processes in healthcare organizations, including the recruitment and selection, job descriptions, job performance and compensation, team work, productivity, and other matters relating to the management of health workers.

13) Law for Public Official: Health Law-Making (mandatory of Law & Health Policy)

This course discusses the process of making a health regulation related to stakeholders who develop the regulation as well as resources used and mechanisms in making the laws. It also relates to the regulation outside of the health sector. All aspects linked to health and non-health strategic should be noted so that these regulations can be implemented properly.

14) Health Demographic (mandatory of Biostatistics)

This subject explores linkage between demographic and public health, the components of population, population sizes associated with the field of public health. It also discussed the demographic transition and epidemiological transition and its implications to the community health.

15) Health Information Systems (mandatory of Health Informatics)

This course explained the concept of methods, instrumentation and data collection procedures, data and information flow and processing, tabulation, reporting and presentation of data. It also discussed the various concepts and issues such as large and sampling data, sentinel, size and health indicators, and data quality by providing several examples of the model.

16) Emergency Nutrition (mandatory of public health nutrition)

This subject discusses correlation between infection and consumption to the nutritional problem as well as diseases that often occur in an emergency situation, assessment and surveillance for nutritional needs in emergencies, feeding programs for vulnerable groups (infants and toddlers), both from the point of supplementation and therapeutic treatments. Then also discussed ways

- of prevention, and control of infectious diseases, and treatment in an emergency. This includes monitoring and evaluation.
- 17) *Elderly Nutrition (mandatory of public health nutrition)*
This subject explores concept and theory of ageing, and problems related to elderly, included social issues, changing and its implication to nutrition, assessment of nutritional status, the main nutritional needs, macro and micro, body composition, exercise needs.
- 18) *Environmental Health (mandatory of environmental health, health promotion)*
This course outlines the ecological principles of environmental health history, various policies and programs in Indonesia environmental health. This course also describes the process of transformation of environmental health in Indonesia, as well as the prospect of environmental health problems in the future.
- 19) *Management of Water Resources (mandatory of environmental health)*
This course outlines and management problems encountered in different socio-cultural level in Indonesia is affecting efforts to increase and stabilization of health status.
- 20) *Area-based Disease Management (mandatory of environmental health)*
This material discusses the transformation of healthcare, advanced knot theory and its application, the disease in the spatial perspective, regions and ecosystems, climate, habitat and health, population medicine perspective, review exposure analysis (exposure assessment), an indicator of defect and area-based surveillance, analysis and management area-based disease risk factors, the analysis of spatial epidemiology, management of area-based infectious diseases, global infectious disease epidemiology, health management in disaster situations, outbreak management, management of communicable diseases in Indonesia, a tourist area of health management and health management of Hajj.
- 21) *Management of Environmental Health Strategy (mandatory of Environmental Health)*
This subject discusses various strategic efforts to prevent and control environmental health issues in the community level such as in housing, residential, public, transportation, and in the workplace, school, and campus. The course includes strategies to control environmental health issues in the sectorial programs such as Ministry of Health, Ministry of Environment, Ministry of Energy and Mineral Resources, Ministry of Agriculture, and Ministry of Public Work.
- 22) *Health Promotion (mandatory of health promotion)*
This subject explores health promotion concepts, health promotion practices as well as the study of the crisis on the implementation of health promotion in several health programs.

23) *Health Behavior (mandatory of health promotion)*

This course investigates health behaviors, the concept of the healthy-sick on the society, socio-cultural factors affecting family planning, environmental health and health care utilization.

24) *Organizing and Community Development (mandatory of health promotion)*

This course discusses the definition and concept of empowerment, various levels of empowerment and empowerment strategies. This course comes with some good case studies in the health sector and outside the health sector but remained associated with health.

25) *Socio-cultural Aspects of Health (mandatory of health promotion)*

This course discusses the concept of community, culture, society and cultural dynamics, the scope of medical anthropology, medical systems, health behavior, ecology and disease, socio-cultural aspects of the nutrition program, family planning and health care utilization.

26) *Health Promotion in Institutions (elective of health promotion)*

This course outlines the distinctive features of health care institutions, the workplace, insurance and school. This concerns the means of education, personnel and facilities associated with the process and steps of planning, implementation and evaluation of health promotion.

27) *Healthy Lifestyle (elective of health promotion)*

This course discusses the various approaches a healthy lifestyle, relaxation techniques, various healthy living movement both in society and in the institutions as well as the global movement for healthy living.

28) *Partnerships in Health Promotion (elective of health promotion)*

This subject explores the sense of partnership, the principles of partnership, strategic partnership and the success of partnerships as well other issues related to partnerships.

29) *Current Issues in Health Promotion (option of health promotion)*

This course discusses the evidence-based health promotion, Cochrane library of health promotion, global issues related to health promotion as well as up to date literature related with the latest issue of health promotion that is drawn from international journals in the last 5 years.

30) *Health Promotion Policy (option of health promotion)*

This course explores the situation of health promotion especially in Indonesia that is relatively less concerned and lagging behind. The discussion focused on policy related to health promotion in Indonesia.

31) *Policies and Child Protection Programs (option of health promotion)*

This subject discusses the problems, challenges and constraints to meet the welfare rights, protection and child health in Indonesia, at the policy level, programmatic, and action in the field.

32) *Safe Motherhood and Child Survival (mandatory of reproductive health)*

This course explores the basic concept of safe motherhood, community organizing, community health education and methods of research on safe motherhood.

33) *Adolescent Reproductive Health (mandatory of reproductive health)*

This course describes how adolescent reproductive health is a determining factor for the success of reproductive health in the future. This lecture covers efforts, strategies and interventions that are made to the adolescents community in order to prevent the occurrence of adolescent problems due to neglect of issues of adolescent reproductive health in the community.

34) *Reproductive Health of Elderly (mandatory of reproductive health)*

This course discusses the introduction of elderly and its problems, changing the structure and physical functions of body particularly reproduction, nutritional status and the prevention of premature aging, the trend of the use of antioxidant vitamins and other substances.

35) *Sexually Transmitted Diseases and HIV / AIDS (mandatory of reproductive health)*

This course explores the development of STD-HIV/AIDS situation in the world and Indonesia, factors associated with the development of STD-HIV/AIDS problem, various methods to identify, monitor, and prevent the development of STD-HIV/AIDS issues, policies and national strategy to control STD-HIV/AIDS in Indonesia, the behavior of adolescents and its association with reproductive health issues in general and STD-HIV issues in particular, the principles of counseling and current issues in STD-HIV/AIDS and adolescent behavior in the context of health reproduction

2. Universitas Gadjah Mada**a. Course provided and course description**

The subjects that are offered in the Department of Public Health in Universitas Gadjah Mada are divided into 3 categories: (i) Social Determinants of Health subjects; (ii) Subjects with SDH section; (iii) Subjects with SDH-related component.

i) Social Determinants of Health Subjects

None

ii) Subjects with SDH Section (explicit)**1) *Social and Behavioral Science in Public Health (Mandatory)***

This subject teaches students approach to social and behavioral sciences in public health, social epidemiology and trans-disciplinary perspectives and complexity in the social health sciences (Definition and understanding of health sociology, anthropology and health psychology the concept of social and behavioral epidemiology; hierarchy of health and scientific disciplines to study the concept of

pain); culture, health and medical pluralism (system and range of health services; comparison between the system and range of health care in the world and Indonesia), social determinants of health (reasons to behave well or ill of the context of individual, family, social structure and social culture), social change, health interventions and professionalism, socio-cultural dimensions, the general perception of health & medical, the concept of healthy and sick - a cold case, gender, health, and social stigma, a new paradigm for health promotion (understanding, stage & framework of health promotion activities), behavior changes: from individual behavior theory to ecological approach, social determinants of behavior in a global issue: climate change, bioterrorism and disaster, group discussions: behavior change, group disaster, smoking policy.

2) *Priority Health Problem (Block 1 of Behavior and Health Promotion)*

This block explores priority health problem that emphasizes three competencies to be achieved by students. The competencies are an understanding of the determinants of health, mastery of the knowledge base for health promotion as well as the skills to identify problems. Competencies will be achieved by students through 2 units of study.

iii) Subjects with SDH-related Component (implicit)

1) *Biostatistics (Mandatory)*

The course explores introduction to Biostatistics and Descriptive Analysis, Random Variables and Probability Distribution, Statistical inference - Tests of Hypotheses and Interval Estimation, Analysis of categorical data, Analysis of Variance, Linear regression and correlation, Logistic regression, Poisson & Nonlinear, Survival Analysis, and Sample Size Estimation.

2) *Epidemiology (Mandatory)*

This subject discusses Population Health (Indicators and Measurement, Comparison, Adjustment, Distribution and Health Equity), Disease incidence, Risk and Determinants of Disease, Application of Epidemiology in the Control of Work Injuries and Accidents, Concepts of Biomedical, Bio-eco-social and Health System As Determinants of Disease Incidence, The use of Epidemiologic Data for Problem Solving and Program Planning in Public Health, Epidemiological studies in Health Policy, Tutorial 1: Measuring Population Health, The effects of Determinants of disease and Cause - Effect Relationship (Population Health Indicators), Impact Of Risk Factors to Burden of Disease in the Population and Public Health Intervention (Effect of Risk Factors and Cause-Effect Relationship), Study of Social Epidemiology in Health Policy (Impact of Risk Factors), Epidemiology Application in the Control of Infectious Disease (Epidemiology of Infectious Diseases, Epidemiology of Cardiovascular Disease (CVD), Epidemiology for Health Promotion, Hepatitis A: Burden of Disease in the Community), Tutorial 2: Paralytic

Illness in Ababo, Tutorial 3: Epidemiology terminology, Tutorial 4: Cigarette Smoking and Lung Cancer: Student's Guide.

3) *Health Services Management and Policy (Mandatory)*

This subject discusses Health Services Management & Policy, Health Systems and Health Policy Framework: context, process, and actors, Setting the Policy Process and power that influence, Health Sector Reform in Indonesia and Global, Health Decentralization Policy & Health sector Governance, Health Policy, Doing Policy Analysis, Management principles for health care institutions, Human Aspects in System Management of Service Organizations, Technical System Delivery, Renewal of the Organization, Mapping the future, and Future issues in health management

4) *Research Methodology (Mandatory)*

This course explores Introduction to Research Methods and Philosophy of Science: Philosophy, role and importance of research on policy and health services management, Quantitative Research: an observational study design and Study Design of experimental and quasi-experimental, Literature Review, Theory and Research Variables, Research paradigms and Deductive-Inductive Thinking, Research Questions, Framework Concepts and Hypotheses, Qualitative research: qualitative research design, Qualitative Research: Data collection and data collection strategies as well as Management and analysis of data, The research instrument, Validity and Reliability, Research Ethics and Proposal Development, Preparation of Manuscripts / Research Report.

5) *Environmental Health (Mandatory)*

This subject discusses an introduction of Public Health Sciences and the Environmental Health Sciences, Environmental Health Sciences in the Body of Knowledge and Public Health Biology, Environmental Health Dynamics, Food, Water & Air Borne Diseases, Environmental Health Policy, Environmental Health Management, Innovation of Environmental Health Programs in the Municipality of Yogyakarta, Hospital Waste Management, Waste Management by NGOs, Stakeholder Analysis Of Clean River, Clean Cities Tour, Healthy City, Weekly Activities Schedule for Practicum: Dissolved oxygen, BOD, Chlor levels (water disinfectant), chloride, alkalinity, levels of Iron).

6) *Health Management Program*

This subject teaches an introduction to program and project management, Technical assistance of program implementation, Monitoring and evaluation program, Program Planning and Budgeting I (Vertical analysis, stakeholder analysis), Program Planning and Budgeting II (Problem analysis, goal analysis), Program Planning and Budgeting III (LogFrame), Program Planning and Budgeting III (WBS, Work Plan, Budget), Microsoft Project I, Microsoft Project II, Logistics management in the health program I, Logistics management in the health program II, Economic evaluation program.

7) *Law, Ethics and Regulation of Public Health*

This course explores an introduction to Law and Public Policy As a cornerstone principle of regulation (in health care), 'Red Flags' in the Procurement of Goods and Services, and efforts to avoid danger, Principles of regulation in health care (Hierarchy of legislation (Comparison between the Law 10/2004 on the establishment of legislation with the new Act) and the National Regulatory, Synchronization; The implications of regional autonomy on the regulation of public health services - the division of central and local authorities (PP 38/2007)), Policy Decision from the aspect of local authority (Hierarchy of legislation (Comparison between the Law 10/2004 on the establishment of legislation with the new law (Law No. 12/2011) & National Regulation Synchronization; The implications of Law 12/2011 in the regional authority to adopt policies), Health care - legal relations between Health Provider and Patient: therapeutic transactions, informed consent, Professional accountability (ethics and law) and law enforcement mechanisms related to medical malpractice, Legal framework and health environment regulatory related to sustainable development; Theory, doctrine, concepts, and principles of law in the field of environmental health.

8) *Leadership and Communication*

This subject explores Basic Principles of Leadership, Leadership attributes, Competence and Leadership Skills, Leadership in Practice, Dimensions & Leadership Style, Self Assessment, Power, Politics and Culture, Followership, Negotiation, Lobbying, Advocacy, Interpersonal communication, Effective presentations, Conflict Management, and Managing Change.

9) *Health Sector Reform and Health Financing (optional)*

This course discusses materials in 2 modules: decentralization policy in health sector (module 1) and health system reform (module 2). Module 1 consists of seven years Implementation of Decentralization in Health Sector, Health System Change in Indonesia Due to Decentralization, and Local Fund Balance as Triggers for Reform. Module 2 consists of diagnostic Health Systems for Health Reform, financing button, Payment Mechanism Button, Button Regulation: A Case Study Changes In the city of Yogyakarta, Organizing Health Services button, Changing Behavior Button, and Political analysis.

10) *Disaster Management (optional)*

This subject explores framework of the Disaster and Risk Abatement and Business of Health, Types of Disasters, Financing, Approach to Public Health and Disaster Management and Surveillance, Disaster governance, Medical Logistics and Volunteer Management, Medical Treatment of Acute Phase, Informatics and Telematics, Health Promotion, Mental Health and Psychosocial Aspects, Networking and Political Aspect, and Leadership.

11) National and Local Health System (Block 1 of Health Policy and Service Management)

In addition to mandatory and option subjects, there are also other subjects that are taught in a block. The national and Local Health System as block 1 of Health Policy and Service Management explores Health System Development (WHO perspective in the health system), Health System Development (Local Health System Mapping based on WHO and policy analysis approach), Strategic Management and Financial Sustainability (Strategic aspects of the role of institutions in the health system (Governance System)), Performance Health System (Health system as a social system: The system boundaries, Emergent properties and Autopoiesis, the internal structure of the system and attractors), Performance Health System (Thinking Systems and Dynamics Building Blocks of Health System (WHO, 2007, WHO, 2009), Social Security and Health Insurance (Financing System Developments In Some Countries. Case: United States, Malaysia and India.), Health Human Resources (HR Perspectives in Health System), Health System Development: Organization Theories, Effectiveness and Efficiency, Incremental vs Totalistic Reform, Different Type of System Design, TQM and Quality Regulation: Current issues about the quality of health services and how to analyze, Social Security and Health Insurance (Financing System Developments In Some Countries. Case: Thailand and Germany), Health System Development: Health System Reform, TQM and Quality Regulation: Analysis of quality problems with a systems approach (Berwick Model), Interventions to patient / client experience and the formulation of an organization's quality policy that is concerned with the experience of patients, Implementation strategies-Organizational design, Health Human Resources: HR Policy & Strategy for Strengthening Health Systems, Social Security and Health Insurance (The concept of Health Insurance: Social vs. Commercial), Social Security and Health Insurance (Health Financing and Equity in Health Insurance).

12) Situation Analysis of Health Sector (Block 2 of Health Policy and Service Management)

This block discusses Performance Health System: population health, Strategic Management and Financial Sustainability, Health System Development: Analysis of Social Networks and Social Capital in the Context Root Cause, Human Resources: Analysis of Human Resources in Health Sector, Performance Health System: Access, Responsiveness of Health Services Coverage, Equity Health Services, Human Resources: Monitoring and Evaluation of Community Health Workers, Performance Analysis of Health Workers, TQM and Quality Regulation: Quality Problems Analysis in the Micro Systems of Organization, Quality Management Systems in Healthcare Organizations, Intervensi Improvement Process in Micro System, Social Security and Health Insurance: The concept of the National Social Security and Development, Ideology and the Transformation of

BPJS, Role and Functions of the National Social Security BPJS and DJSN, Benefit Package and Equity in Health Insurance Implementation, Role of Stakeholders in the Health Insurance System, The Role of Public Health in the Health Insurance System / Jamkesmas, Health System Performance: Public Health Information System, TQM and Quality Regulation: Statistical Approaches in Process Improvement Intervention in Micro System, Health System Performance : Human Resources in Health Systems.

13) Need and Target Assessment (Block 2 of Behavior and Health Promotion)

This block has 3 units of study, they are (1) identification of sources of data and health needs of individuals, communities and residents (from local to national level), as well as the identification of behavior, and organizational environment that can support or improve health, (2) the methods and strategies data collection can be used in the identification of the needs of individuals and communities; and (3) the ability to develop alternatives and priorities for interventions that can be accepted by society.

14) Program Development (Block 3 of Behavior and Health Promotion)

This block discusses the various theories of behavior change as a basis for designing a health promotion program, the steps in designing a health promotion program as well as a variety of skills needed to design a health promotion program. In addition, the block will also be discussed regarding the evaluation of health promotion programs, because program evaluation methods, including things that must be designed before the health promotion program was implemented. On this block, students will learn these things theoretically as well as practical by devising a program of health promotion with reference to the need assessment has been done on the block II. The results of the design of this program will be implemented in block IV.

15) Implementation Program (Block 4 of Behavior and Health Promotion)

Going directly to the field to carry out health promotion program has been designed for students in Block 3 of the Behavior and Health Promotion. This block is the implementation phase of the program that has been designed in block III. To achieve competence that has been established, this block consists of several units, namely (1) design implementation, (2) strategy and the theory underlying the implementation of health promotion programs, (3) management of health promotion programs, and (4) program implementation issues health promotion.

16) Evaluation Program (Block 5 of Behavior and Health Promotion)

Block 5 consists of 3 units, starting with the philosophy of evaluation, followed by the design of epidemiological and social research methods for evaluation of health promotion programs. Block 5 will end with a discussion of the analytical evaluation of health promotion, both quantitatively and qualitatively. Evaluation design that should have been designed since the program-planning phase will be discussed in terms of methodology, epidemiology and social research methods in

this block. Besides the deepening of research methods, particularly the experimental design and qualitative methods that have been studied previously will again be discussed and enriched to strengthen the measurement of the success of a health promotion program.

Annex 2 – Table of published literature relating to SDH country needs (references at bottom of table, page 110)

No.	Reference/title of article	Name of contact details of first (or other main) author	Objective of study	Methods	Findings	Recommendations
(1)	The social context of controlled drug use amongst young people in a slum area in Makassar, Indonesia	Sudirman Nasir, School of Public Health, Hasanuddin University, Makassar, Indonesia, sudirmannasir@gmail.com	This qualitative study examines the experience of young people in a slum area (lorong) in Makassar, eastern Indonesia, who use drugs but are not drug dependent and who employ various forms of self regulation to control their use	Semi-structured interviews were conducted with eight controlled drug users	The study found that whilst controlled drug users lived in a drug risk environment, they were not deeply embedded in the street culture, risk-taking practices and drug scene within their locality. Their employment, albeit in the informal economy and in low-paid jobs, facilitated their perspective that the status of rewa (a local construct of masculinity) and gaul (being sociable and up-to-date) could and should be accomplished through conventional means such as jobs and halal (legitimate) income. Their employment generated both direct benefit (legitimate income) and indirect benefit, including meaningful activities, structured time, positive identity and wider social networks (bridging social capital). This enabled them to have a stake in mainstream society and provided an incentive to	The study showed the importance of sociological concepts of direct and indirect benefits of employment and of social capital in understanding the social context of controlled drug use amongst young people in the lorong. Additionally, drug policy should be more cognizant of the social vulnerability in the lorong and of the need to increase access to employment amongst young people in order to potentially decrease the likelihood of problematic drug use.

					control drug use. All factors which are protective against escalation into problematic drug use.	
(2)	Are smokers rational addicts? Empirical evidence from the Indonesian Family Life Survey	Budi Hidayat Department of Health Policy and Administration, Faculty of Public Health, the University of Indonesia, Indonesia b_hidayat@hotmail.com	This study provides an empirical test of a rational addiction (henceforth RA) hypothesis of cigarette demand in Indonesia.	Four estimators (OLS, 2SLS, GMM, and System-GMM) were explored to test the RA hypothesis. The author adopted several diagnostics tests to select the best estimator to overcome econometric problems faced in presence of the past and future cigarette consumption (suspected endogenous variables). A short-run and long-run price elasticities of cigarettes demand was then calculated. The model was applied to individuals pooled data derived from three-waves a panel of the Indonesian Family Life Survey spanning the period 1993-2000.	The past cigarette consumption coefficients turned out to be a positive with a p-value < 1%, implying that cigarettes indeed an addictive goods. The rational addiction hypothesis was rejected in favour of myopic ones. The short-run cigarette price elasticity for male and female was estimated to be -0.38 and -0.57, respectively, and the long-run one was -0.4 and -3.85, respectively.	Health policymakers should redesign current public health campaign against cigarette smoking in the country. Given the demand for cigarettes to be more prices sensitive for the long run (and female) than the short run (and male), an increase in the price of cigarettes could lead to a significant fall in cigarette consumption in the long run rather than as a constant source of government revenue.
(3)	Missed opportunity for standardized diagnosis and treatment among adult Tuberculosis patients in hospitals involved in Public-Private Mix for Directly Observed Treatment Short-Course strategy	Ari Probandari Department of Public Health, Faculty of Medicine, Universitas Sebelas Maret, Jl. Ir. Sutami 36A, Surakarta 57126 Indonesia ariprobandari@yahoo.com	To estimate the proportion of outpatient adult Tuberculosis patients who received standardized diagnosis and treatment at outpatients units of hospitals involved in the PPM-DOTS strategy.	A cross-sectional study using morbidity reports for outpatients, laboratory registers and Tuberculosis patient registers from 1 January 2005 to 31 December 2005. By quota sampling, 62 hospitals were selected. Post-stratification analysis was	Nineteen to 53% of Tuberculosis cases and 4-18% of sputum smear positive Tuberculosis cases in hospitals that participated in the PPM-DOTS strategy were not treated with standardized diagnosis and treatment as in DOTS.	This study found that a substantial proportion of TB patients cared for at PPM-DOTS hospitals are not managed under the DOTS strategy. This represents a missed opportunity for standardized diagnoses

	in Indonesia: a cross-sectional study			conducted to estimate the proportion of Tuberculosis cases receiving standardized management according to the DOTS strategy.		and treatment. A combination of strong individual commitment of health professionals, organizational supports, leadership, and relevant policy in hospital and National Tuberculosis Programme may be required to strengthen DOTS implementation in hospitals.
(4)	The Incremental Cost-Effectiveness of Engaging Private Practitioners to Refer Tuberculosis Suspects to DOTS Services in Jogjakarta, Indonesia	Yodi Mahendradhata Department of Public Health, Faculty of Medicine, Gadjah Mada University, Sekip Utara, Jogjakarta 55281, Indonesia. E-mail: yodi_mahendradhata@yahoo.co.uk	to evaluate the incremental cost-effectiveness of engaging private practitioners (PPs) to refer tuberculosis (TB) suspects to public health centers in Jogjakarta, Indonesia.	Effectiveness was assessed for TB suspects notified between May 2004 and April 2005.	Private practitioners referred 1,064 TB suspects, of which 57.5% failed to reach a health center. The smear-positive rate among patients reaching a health center was 61.8%. Two hundred eighty (280) out of a total of 1,306 (21.4%) new smear-positive cases were enrolled through the PPs strategy. The incremental cost-effectiveness ratio per smear-positive case successfully treated for the PPs strategy was US\$351.66 (95% CI 322.84–601.33). On the basis of an acceptability curve using the National TB control program’s willingness-to-pay threshold (US\$448.61), we estimate the probability that the PPs	The strategy of engaging PPs was incrementally cost-effective, although under specific conditions, most importantly a well-functioning public directly observed treatment, short-course (DOTS) program.

					strategy is cost-effective at 66.8%.	
(5)	Developing a smoke free household initiative: an Indonesian case study	<p>Mimi Nichter, School of Anthropology, University of Arizona, Emil Haury Building, Tucson, Arizona, USA. E-mail: MimiN@u.arizona.edu</p> <p>RETNA SIWI PADMAWATI Centre for Bioethics and Medical Humanities, Faculty of Medicine, Gadjah Mada University, Indonesia</p>	This paper describes a community based survey in Indonesia that investigated these issues as one step in a movement to initiate community-wide household smoking bans.		The survey found high levels of exposure to SHS, high levels of awareness among both women and men that SHS placed women and children at risk for illness, a very low percentage of households having indoor smoking rules, great interest on the part of women to participate in a communitywide ban, and a promising level of male smoker agreement to comply with such a ban. Women expressed a low sense of self efficacy in individually getting their husbands to quit smoking in their homes, but a strong sense of collective efficacy that husbands might agree to a well-publicized and agreed-upon community household smoking ban. Men and women expressed concern about the social risk of asking guests not to smoke in their homes without a communitywide ban and visible displays communicating their participation in this movement.	The smoke free initiative described requires the participation of doctors in community education programs, and is attempting to introduce household smoking bans as a way of turning tobacco control into a family health and not just a smokers' health issue.

(6)	Bringing smoking cessation to diabetes clinics in Indonesia	<p>Mark Nichter. Email: mnichter@u.arizona.edu</p> <p>NAWI NG Department of Public Health, Faculty of Medicine, Gadjah Mada University, Yogyakarta, Indonesia</p> <p>RETNA SIWI PADMAWATI Centre for Bioethics and Medical Humanities, Faculty of Medicine, Gadjah Mada University, Yogyakarta, Indonesia</p>	To assess the feasibility of delivering brief and disease-centred smoking cessation interventions to patients with diabetes mellitus in clinical settings.	We conducted a feasibility study involving two interactive smoking cessation interventions: doctor's advice and visual representation of how tobacco affects diabetes (DA) and DA plus direct referral to a cessation clinic (CC). Follow-up was at 3 and 6 months post intervention. Primary outcome was 7-day-point prevalence abstinence. The study involved male patients recruited from two referral diabetes clinics in Yogyakarta Province, Indonesia during January 2008 to May 2009. Of the 71 patients who smoked during the last month, 33 were randomized to the DA group and 38 to the CC group.	At 6 months follow-up, DA and CC groups had abstinence rates of 30% and 37%, respectively. Of those continuing to smoke, most reported an attempt to quit or reduce smoking (70% in DA and 88% in CC groups). Patients in both groups had increased understanding of smoking-related harm and increased motivation to quit smoking.	This study demonstrates the feasibility of disease-centered doctors' messages about smoking cessation for patients with diabetes, supported by the presence of a CC motivating clinicians to routinely give patients cessation messages.
(7)	The financial burden of HIV care, including antiretroviral therapy, on patients in three sites in Indonesia	Sigit Riyarto Department of Public Health, Medical Faculty, University of Gajah Mada, Jl. Farmako Sekip Utara, Jogjakarta, Indonesia. Tel: ?62-274-549423. Fax: ?62-274-549423. E-mail: sigitriyanto2002@yahoo.com	This paper assesses the extent of the financial burden due to out-of-pocket payments for health care incurred by people living with HIV (PLHIV) and the effect of this burden on their financial capacity.	Data were collected in a cross-sectional survey of 353 PLHIV from three cities in Indonesia (Jakarta, Jogjakarta and Merauke). Respondents in Jakarta were sampled from one hospital and one non-governmental organization working with PLHIV. In Jogjakarta and Merauke, all HIV patients on antiretroviral therapy (ART) who came to selected hospitals during the	Results show that PLHIV had different burdens of payments in the different geographical areas. On average, respondents in Jogjakarta spent 68%, and PLHIV on ART in Jakarta spent 96%, of monthly expenditure for HIV-related care, indicating a substantial financial burden for many ART patients. These patients depended on several sources of finance to cover the	The results of this study confirm previous findings that providing subsidized ART drugs alone does not ensure financial accessibility to HIV care. Thus, the government of Indonesia at central and local levels should consider covering HIV care additional to providing antiretroviral

				interview period were asked to participate in the survey. The survey collected data on the frequency and extent of payments for HIV-related care, with answers cross-checked against medical records.	costs of their care, with donations from their immediate family being the most common method, selling assets and payments from personal income being the second most common method in Jakarta and Jogjakarta, respectively. Most PLHIV in these two areas did not have insurance. In Merauke, there were little observed out-of-pocket payments because the government covers medical costs via the local budget and health insurance for the poor.	drugs free of charge. Social health insurance should also be encouraged.
(8)	Smoking among diabetes patients in Yogyakarta, Indonesia: cessation efforts are urgently needed	Retna Siwi Padmawati Centre for Bioethics and Medical Humanities, Faculty of Medicine, Gadjah Mada University, Yogyakarta, Indonesia	To document the prevalence of tobacco use among male diabetes patients in a clinic based population of Yogyakarta Province, Indonesia; to examine patient's perceptions of smoking as a risk factor for diabetes complications; and to investigate whether patients had received cessation messages from their doctors.	Twelve in-depth interviews and five focus groups (n = 21) with diabetic patients in 2004–2005, followed by a cross-sectional survey of 778 male diabetic patients in diabetes clinics in 2006–2007.	65% of male diabetes patients smoked before being diagnosed, and 32% smoked in the last 30 days. Most patients incorrectly perceived low level smoking safe for diabetics (mean of 3.6 cigarettes). The median range of cigarettes smoked per day was in excess of this 'safe' amount (4–10 cigarettes). Most respondents did not associate smoking with diabetes and its complications. Only 35% of all patients recalled being asked whether they smoked by their doctors, and there were no differences	Many diabetic patients continue to smoke despite the hazard of smoking on diabetes complications and mortality. Smoking cessation is not commonly encouraged by health-care providers in Indonesia, and is not a routine part of diabetes counselling despite the risk of smoking to those with diabetes. Project Quit Tobacco International is currently developing cessation services for

					between smokers and non-smokers. Quit messages received by patients were seen as general health advice and not diabetes specific.	patients with diabetes and encouraging medical and nursing schools to incorporate disease specific tobacco education in its curriculum and skill based classes in tobacco cessation counselling.
(9)	Factors that influence treatment adherence of tuberculosis patients living in Java, Indonesia	<p>Marieke J van der Werf KNCV Tuberculosis Foundation, PO Box 146, 2501 CC The Hague, The Netherlands Tel +31 70 427 0963 Fax +31 70 358 4004 Email vanderwerfm@kncvtbc.nl</p> <p>Bagoes Widjanarko 1Magister program of Health Promotion, Graduate study of Diponegoro University, Indonesia</p>	To obtain information about factors associated with nonadherence, we performed a study comparing adherent and nonadherent TB patients.	Adherent and nonadherent patients randomly selected from hospital records in one urban and two rural districts were interviewed using semi-structured questionnaires. Key informant interviews were done with TB nurses and doctors.	The most frequently mentioned reason for nonadherence to treatment was feeling better. Although the drugs were given free of charge, many patients were nonadherent because of lack of money. Social support was considered very important for adherence. The study indicated that some patients had a negative image about the health care staff, treatment, and quality of medication.	Treatment adherence of TB patients receiving treatment in hospitals in Central Java might be improved by providing health education about treatment duration and side effects, facilitating procedures for receiving treatment free of charge and reducing costs of transportation and consultation. Qualified friendly health care staff able to motivate patients might further improve adherence.
(10)	Paternal smoking and increased risk of child malnutrition among families in rural	Richard D Semba Johns Hopkins School of Medicine, 550 N. Broadway, Suite 700,	To determine whether paternal smoking is associated with an increased risk of child	The relation between paternal smoking and child malnutrition was examined in a population-based sample of 438 336	The prevalence of paternal smoking was 73.7%. The prevalence of underweight and stunting was 29.4% and	Paternal smoking is associated with an increased risk of child malnutrition in families

	Indonesia	Baltimore, MD 21205, USA. rdsemba@jhmi.edu Mayang Sari Helen Keller International, Jakarta, Indonesia	malnutrition among families in rural Indonesia	households in the Indonesia Nutrition and Health Surveillance System, 2000–2003. Main outcome measures were child underweight (weight-for-age Z score <-2) and stunting (height-for-age Z score <-2) and severe underweight and severe stunting, defined by respective Z scores <-3, for children aged 0–59 months of age.	31.4%, and of severe underweight and severe stunting was 5.2%, and 9.1%, respectively. After adjusting for child gender, child age, maternal age, maternal education, weekly per capita household expenditure and province, paternal smoking was associated with an increased risk of underweight (odds ratio (OR) 1.03, 95% confidence interval (CI) 1.01 to 1.05, p=0.001) and stunting (OR 1.11, 95% CI 1.09 to 1.13, p<0.001) and severe underweight (OR 1.06, 95% CI 1.01 to 1.10) p=0.020) and severe stunting (OR 1.12, 95% CI 1.08 to 1.16, p<0.001).	living in rural Indonesia.
(11)	Reading Culture from Tobacco Advertisements in Indonesia	Mimi Nichter, Ph.D University of Arizona Department of Anthropology Emil Haury Building Tucson, Arizona, USA mimin@email.arizona.edu Phone: 520 621 2585 Fax: 520 621 2088 Siwi Padmawati, M.A. Mahesto Danardono, B.A. Center for Bioethics and Medical Humanities	This paper examines the social and cultural reasons for smoking in Indonesia and discusses how the tobacco industry reads, reproduces, and works with culture as a means of selling cigarettes. An analysis is provided of how kretek tobacco companies represent themselves as supporters of Indonesian	Between November 2001 and March 2007, tobacco advertisements were collected from a variety of sources, including newspapers and magazines. Frequent photographic documentation was made of ads on billboards and in magazines. Advertisements were segmented into thematic units to facilitate analysis. Thirty interviews were conducted with smokers	Key themes were identified in tobacco advertisements including control of emotions, smoking to enhance masculinity, and smoking as a means to uphold traditional values while simultaneously emphasizing modernity and globalisation. Some kretek advertisements are comprised of indirect commentaries inviting the viewer to reflect on the political situation and one's	After identifying key cultural themes in cigarette advertisements, our research group is now attempting to engage the tobacco industry on "cultural ground" to reduce consumption and social acceptability. To do this, we will need to take back social spaces that the tobacco industry has laid claim

		Faculty of Medicine Gadjah Mada University Yogyakarta, Indonesia	national identity. This analysis is used to identify strategies to break the chains of positive association that currently support widespread smoking.	to explore benefits and risks of smoking, perceptions of advertisements, and brand preferences. Focus groups (n=12) were conducted to explore and pretest counter advertisements.	position in society.	to through advertising. Active monitoring and surveillance of tobacco advertising strategies is necessary and legislation and enforcement to curb the industry should be put in place.
(12)	Smoking behavior among former tuberculosis patients in Indonesia: intervention is needed	Nawi Ng, Department of Public Health, Faculty of Medicine, Gadjah Mada University, IKM Building 3rd Floor, Farmako St. North Sekip, Jogjakarta 55281, Indonesia. Tel: (+62) 274 547489. Fax: (+62) 274 547489. e-mail: ngnawi@yahoo.com	To document smoking patterns among tuberculosis (TB) patients before diagnosis and following treatment, to identify smoking-related messages given by health professionals and DOTS providers and to identify predictors of smoking relapse.	A cross-sectional survey of 239 male TB patients completed DOTS-based treatment during 2005–2006. Subjects were interviewed at home using a semi-structured questionnaire. Female patients were excluded, as very few smoke.	Most TB patients quit smoking when under treatment, but over one third relapsed at 6 months post treatment. About 30% were never asked about their smoking behavior or advised about quitting. Of relapsed smokers, 60% received only general health messages and not TB-specific smoking messages. DOTS providers are not currently involved in cessation activities. The perception that any level of smoking is harmless for ex-TB patients was a significant predictor for smoking relapse.	Physicians and DOTS providers should be actively involved in smoking cessation activities among TB and ex-TB patients. Based on these data, the Quit Tobacco Indonesia Project is mounting a pilot intervention to train DOTS providers, who are mostly family members of patients, to deliver smoking cessation messages and reinforce the cessation advice provided by physicians during and following TB treatment.
(13)	Physician assessment of patient smoking in Indonesia: a public	Dr N Ng, Department of Public Health, Faculty of Medicine, Gadjah Mada	To explore Indonesian physician's smoking behaviours, their	Design: Cross-sectional survey. Setting: Physicians working in Jogjakarta Province, Indonesia,	22% of male (n = 50) and 1% of female (n = 2) physicians were current smokers.	Lack of training in smoking cessation seems to be a major

	health priority	University, IKM Building 3rd Floor, Farmako Street, North Sekip, Jogjakarta 55281, Indonesia; ngnawi@yahoo.com	attitudes and clinical practices towards smoking cessation.	between October and December 2003. Subjects: 447 of 690 (65%) physicians with clinical responsibilities responded to the survey (236 men, 211 women), of which 15% were medical faculty, 35% residents and 50% community physicians.	Approximately 72% of physicians did not routinely ask about their patient's smoking status. A majority of physicians (80%) believed that smoking up to 10 cigarettes a day was not harmful for health. The predictors for asking patients about smoking were being male, a non- smoker and a medical resident. The odds of advising patients to quit were significantly greater among physicians who perceived themselves as sufficiently trained in smoking cessation.	obstacle to physicians actively engaging in smoking cessation activities. Indonesian physicians need to be educated on the importance of routinely asking their patients about their tobacco use and offering practical advice on how to quit smoking.
(14)	The relevance and prospects of advancing tobacco control in Indonesia	Widyastuti Soerojo Tobacco Control Foundation, Jakarta, Indonesia tsoerojo@yahoo.com	this paper analyzes tobacco control in Indonesia, a major consumer and producer of tobacco products. We examine the relevance and prospects of advancing in Indonesia four cost- effective tobacco control strategies: price and tax measures, advertising bans, clean air legislation, and public education.	Using published data about consumption, economic aspects, and legislation	Given its large population and smoking prevalence, Indonesia ranks fifth among countries with the highest tobacco consumption globally. Over 62% of Indonesian adult males smoke regularly, contributing to a growing burden of non- communicable diseases and enormous demands on the health care system. Tobacco control policies, however, have remained low on the political and public health agenda for many years. One reason was the contribution of tobacco to government	We conclude with several suggestions for action for the public health community.

					<p>revenues and employment, particularly in the industrial sector. But tobacco's importance in employment has fallen significantly since the 1970s from 38% of total manufacturing employment compared with 5.6% today. Widespread use of tobacco since the 1970s and the concomitant burden of non-communicable diseases have given rise to a more balanced view of the costs and benefits of tobacco production over the last decade. The first tobacco control regulation passed in 1999, succeeded by amendments in 2000 and 2003. Today, few restrictions exist on tobacco industry conduct, advertising, and promotion in Indonesia.</p>	
(15)	<p>Linking Global Youth Tobacco Survey (GYTS) Data to the WHO Framework Convention on Tobacco Control: The Case for Indonesia</p>	<p>Tjandra Y. Aditama doctjand@indosat.net.id</p>	<p>Indonesia has the fifth highest rate of annual cigarette consumption per person of all countries worldwide. The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of</p>	<p>The 2006 Indonesia GYTS is a school-based survey that included separate samples for Java and Sumatera, representing more than 84% of the population of Indonesia. Each sample used a two-stage cluster sample design that produced representative samples of students in secondary grades 1–3, which</p>	<p>This report shows that more than 1 in 10 students (12.6%) currently smoked cigarettes, with the prevalence among boys (24.5%) significantly higher than among girls (2.3%). Of the students who currently smoked, more than 7 in 10 (75.9%) reported that they desired to stop smoking now. Regarding secondhand</p>	<p>Tobacco control in Indonesia will likely not move forward until the government evaluates and strengthens existing laws, considers passing new strong laws, and develops protocols for enforcing all laws. The Indonesian government also should</p>

			<p>youth-based tobacco control programs. Data in this report can be used as baseline measures for future evaluation of the tobacco control program implemented by Indonesia's Ministry of Health.</p>	<p>are associated with ages 13–15 years.</p>	<p>smoke exposure, more than 6 in 10 students (64.2%) reported that they were exposed to smoke from other people in their home during the week before the survey. More than 9 in 10 students (92.9%) had seen a lot of advertisements for cigarettes on billboards during the past month and more than 8 in 10 (82.8%) had seen a lot of advertisements for cigarettes in newspapers or in magazines.</p>	<p>strongly consider accession to the World Health Organization Framework Convention on Tobacco Control.</p>
(16)	<p>Association of Smoking Behavior, Consumption of Food/Beverage, and Physical Activity with Hypertension Among Adult Obese Respondents in Indonesia</p>	<p>Marice Sihombing Centre for Biomedical and Pharmaceuticals Research and Development, NIHRD, Jakarta</p>	<p>The objective of the study was to obtain prevalence of hypertension in obese respondents above 18 years old and was to assess the association between various respondent characteristics i.e. age, sex, education, living area, economic status and smoking habit, consumption of salty foods, caffeine beverages, flavorings (vetsin, soy sauce, shrimp) and physical</p>	<p>The research design was a cross sectional study conducted in 440 regencies in 33 provinces in Indonesia. Data were collected by direct interview and physical measurement such as body weight, height and blood pressure by trained surveyors. The number of obese respondents above 18 years old were 114 692.</p>	<p>The prevalence of hypertension in obese respondents above 18 years old was 48.6%. Prevalence of hypertension in obese man was 50.1% prevalence in obese women was 47.9%. The risk of hypertension increased in obese respondent age 55+ years old (OR 8.37;95% CI 7.68-9.13), male gender (OR 1.18;95% CI 1.12-1.25), lower education level (OR 1.40;95% CI 1.30-1.49), ex smokers (OR 1.22;95% CI 1.11-1.35), insufficient physical activity (OR 1.05;95% CI 1.00-1.10) and economic status (OR</p>	

			activity with the risk of hypertension.		1.05;95% CI 1.01-1.09). The association with living area, consumption of salty food, caffeine beverages and flavorings (vetsin, soy sauce, shrimp) were not statistically significant.	
(17)	Coronary Heart Disease Prevalence in Mine Workers and Its Risk Factors Analysis	Rizky Putri, S. Community Medicine, University Of Indonesia, Jakarta, Indonesia	to know the prevalence and risk factors for coronary CHD in mine workers.	Using a cross-sectional study in a population of mine workers from a mine company in Kalimantan. The secondary data is obtained from the workers' medical check-up record on the year 2009. From simple random sampling, 1651 samples are recruited. Samples are being analyzed using PASW version 18	2009 CHD prevalence in mine workers is 1,2%, with ST elevation or depression as criteria for CHD diagnosis. The risk factors for CHD were hypertension, obesity, at-risk waist circumference (p<0,01), and occupation (p=0,01). Multivariate analysis was conducted and the main determinant factor of CHD was hypertension (p= 0,000; adjusted OR 5,64; 95%CI 2,15-14,81). Other determinant factors were waist circumference (p=0,007; adjusted OR=4,29; 95CI%=1,49-12,33) and occupation (p=0,018; adjusted OR=3,37; 95%CI=1,22-9,25).	Hypertension and waist circumference were known for their role in CHD pathophysiology by interfering the lipid metabolism, causing endothelial dysfunction, and changing the insulin sensitivity. They interact and lead to atherosclerosis, which accelerates the CHD process. Occupation was a determinant factor due to its correlation with physical inactivity in non-manual job. A proper education about these risk factors (plus their complications and management) to the mine workers can provide optimum prevention of CHD.
(18)	Smoking and Socio-	Wasis Sumartono	to present the	The data used for this study	Overall, 86.8% respondents	This finding suggests

	<p>Demographic Determinant of Cardiovascular Diseases among Males 45+ Years in Indonesia</p>	<p>w_sumartono@yahoo.com ; Tel.: +62-21-4243314; Fax: +62-21-4211845.</p>	<p>prevalence of Cardio Vascular Diseases (CVDs) defined as been diagnosed or having symptoms of Coronary Heart Disease, Arrhythmia, or Heart Failure. The main risk factor analyzed is smoking behavior.</p>	<p>was from Basic Health Survey of 2007, a National baseline data collected every three years which consist of more than one million samples representing 33 provinces in Indonesia. Information on socio-demographic characteristics, history of CVDs and smoking behavior were collected by highly-trained interviewers using a questionnaire which had been tested. A sub-sample of the survey consisting of 100,009 males aged 45 years and over was analyzed. Crude and adjusted odds ratio (OR) were analyzed using logistic regressions to estimate the prevalence of CVDs by smoking behavior and socio-demographic characteristics.</p>	<p>reported that they had never been diagnosed as having CVDs.; while 2.1% respondents reported that they had been diagnosed by a health professional (a doctor or a nurse) of having CVDs. The interviewers also identified three signs and symptoms of CVDs for all respondents if they reported of never been diagnosed CVDs. Among all respondents 2.3% had symptoms of coronary heart disease, 4.9% had symptoms of arrhythmia, and 3.9% had symptoms of heart failure. The prevalence of CVDs was significantly higher in former smokers (OR = 2.03), and duration of smoking for more than 20 years. The prevalence of CVDs was significantly higher among older groups. Old males who lived in Sulawesi island had higher probability of having CVDs (OR = 1.67). The lower prevalence of CVDs seemed to have associated with higher among Senior High School Graduate compared to those who Never Schooling (OR = 0.8). Since population of</p>	<p>that Indonesia should ratify Framework Convention on Tobacco Control and start implementing measures to control tobacco uses in order to reduce public health and economic consequences of smoking in the future.</p>
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					Indonesia is relatively young, the future of health care costs of Indonesia would be high due to high prevalence of smoking among males population.	
(19)	Indonesian Doctors Understanding on Hypertension and its Problems in Daily Practice	Mohammad Saifur Rohman Indonesian Society of Hypetension (InaSH) survey working group	to collect data regarding the knowledge and its application among annual scientific meeting of Indonesian Society of Hypertension (InaSH) participants about hypertension, hypertension management and its problems.	This study performed by collecting and analyzing quistionnaires during annual scientific meeting of InaSH 2007 to 2009. The data presented as percentage of the lowest and the highest values.	there was a significant increases in participant interest during the first three years of InaSH, with the number of general practitioner as large as specialist. The scientific meeting was the major source of information for respondents. As many as 74.5% of respondents measure blood pressure properly. The knowledge about hypertension therapy is quite well, as more than 50% of respondents have addressed all question correctly. The most common target organ damage observed was brain, heart and kidney, whereas the most common cause of uncontrolled blood pressure was irregular medication.	
(20)	Prevalence of Hypertension and Its Determinants in Indonesia	Ekowati Rahajeng Biomedical and Pharmacycal Research and Development Center	to evaluate: (1) hypertension prevalence in Indonesia based on blood	This study used cross sectional design for prevalence analysis and case control design for risk factor	The hypertension prevalence in Indonesia based on measurements and diseases history was	

		National Institute of Health Research and Development	pressure measurements and interview about of the history of diseases; (2) characteristics and determinants of hypertension in Indonesia; (3) the risk factors of hypertension. This valuable information could guide evidence based plans on prevention and control program of non-communicable diseases and their risk factors in Indonesia.	analysis. For case control analysis, the cases were respondents who had systolic blood pressure >140 mmHg and/or diastolic >90 mmHg (new hypertension case). While controls were the respondents who had systolic blood pressure <140 mmHg and diastolic <90 mmHg and they never have been diagnosed by health officer. The analysis was done using multivariate regression logistic complex samples analysis.	32.2%. The significant risk factors were elderly (OR 11.5), male gender (OR 1.3), low education (OR 1.6), obesity (OR 2.8), and abdominal obesity (OR 1.4). However, prevention programs and control of NCD and its risk factors will be needed to decrease the prevalence of hypertension in Indonesia.	
(21)	Obesity as a poverty-related emerging nutrition problems: the case of Indonesia	Achadi, Endang FKMUI	to raise awareness on the increasing obesity problem and to set recommendations to prevent obesity.	Data from national basic health research 2007	Stunted adults in developing countries are 1.2 times more likely to be overweight than non-stunted adults. Approaches to overcoming obesity in adulthood emphasize dietary changes, increasing physical activity and behaviour modification.	It is important for Indonesia to target nutrition intervention for female adolescents, pregnant woman to first 2 years of life, initiate nutrition education for school-age children and disseminate Holistic Healthy Framework Approach with key message 'Initiate healthier food choices'. Prompt Nutrition Guidelines and the use of lower body mass

						index cut-off should be considered.
(22)	Heart Failure in NCVJ Jakarta and 5 hospitals in Indonesia	Bambang Budi Siswanto Department of Cardiology and Vascular Medicine, University of Indonesia, Indonesia	to search for predictors of mortality and re-hospitalization	<p>In 2005: a pilot cohort study of 100 consecutive new cases of Acute Decompensated Heart Failure (ADHF) at NCVJ Jakarta</p> <p>In 2006, we conducted an Acute Decompensated Heart Failure Registry (ADHERE) with the participation of five hospitals including National Cardiovascular Center (NCVC) Jakarta, the top cardiovascular referral hospital. In total, there were 1687 patients admitted with ADHF. The mean age was 60 years and male patients were 64.5%.</p>	<p>the independent predictors for mortality and re-hospitalization are high NT proBNP at entry, NT proBNP at discharge, not decreased >35% during hospitalization, NYHA functional class 4, edema with a BMI >30 kg/m², ejection fraction <20%, acute pulmonary edema, not on a beta-blocker, hemoglobin <12 g/dl and Hyponatremia <130 mmol/L. More than 78% using ACEI/ARB, diuretic and aldosterone antagonist, but only 32% using beta-blocker.</p> <p>There are increasing numbers of hospitalized heart failure patients in NCVJ Jakarta. In 2007 there were 1409 patients and an increase in 2008 to 1476 hospital admissions. Also there has been an increase in in-hospital mortality to around 12 %.</p>	Heart failure is a leading cause of hospitalization and readmission in NCVJ. Indonesian heart failure patients were younger, sicker, with a poor EF and Diabetes compared to others. The in-hospital mortality ranges from 6% to 12% and the re-hospitalization rate is 29%. Poor compliance, poor EF and Diabetes are the predictor for readmission. Health insurance improves survival probability. There is a need for better heart failure services.
(23)	Prevalence and predictors of undiagnosed diabetes	Laurentius A. Pramono Department of Epidemiology, Faculty of	to find the prevalence and prediction factors of undiagnosed diabetes	cross-sectional design was conducted on subjects from National Health Survey,	from 24417 subjects who undergo oral glucose tolerance test, we choose	prevalence of undiagnosed diabetes mellitus is 4.1%.

	mellitus in Indonesia	Public Health University of Indonesia I_aswin@hotmail.com	mellitus in an Indonesian adult population. By recognizing the prediction factors, we can make epidemiological modeling and scoring system of undiagnosed diabetes mellitus in Indonesia which can be used as a screening tool in primary health care and health care with minimal diagnostic facility.	Ministry of Health Republic of Indonesia 2007. Research population was upper than 18th years old. Diabetes mellitus was diagnosed by oral glucose tolerance test based on WHO 1999 standard which has been adapted by Indonesian Society for Endocrinologist. Subjects were categorized undiagnosed if they were newly diagnosed from the survey.	20249 subjects who have complete data on important variables. After eliminating subjects bellow 18 years old, we have 18956 subjects included in the study. Prevalence of undiagnosed diabetes mellitus is 4.1% from total 5.6% of diabetic population in Indonesia. Subjects are included in the analysis is undiagnosed diabetes mellitus subjects (778 subjects) and subjects with normal blood glucose or non-diabetes (16011 subjects). From bivariate analysis, variables age, sex, social economic status, education level, obesity, central obesity, hypertension, physical inactivity, and smoking habit have significant association with undiagnosed diabetes mellitus ($p < 0,05$). From multivariate analysis, we found prediction factors of undiagnosed diabetes mellitus are age, obesity, central obesity, hypertension, and smoking habit.	Prediction factors of undiagnosed diabetes mellitus in Indonesia are age, obesity, central obesity, hypertension, and smoking habit.
(24)	Journeys to tuberculosis treatment:	Y Mahendradhata Public Health Department,	We seek to document patient journeys toward	TB patients in Jogjakarta municipality (urban) and Kulon	In total, 67 TB patients and 22 family members were	Most TB patients took over a month to reach a

	<p>a qualitative study of patients, families and communities in Jogjakarta, Indonesia</p>	<p>Faculty of Medicine, Gadjah Mada University, Jogjakarta, Indonesia yodi_mahendradhata@yahoo.co.uk</p>	<p>TB diagnosis and treatment and factors that influence health care seeking behavior.</p>	<p>Progo district (rural) were recruited from health care facilities participating in the DOTS strategy and health care facilities not participating in the DOTS strategy, using purposive sampling methods. Data were collected through in-depth interviews with TB patients and members of their family and through Focus Group Discussions (FGD) with community members.</p>	<p>interviewed and 6 FGDs were performed. According to their care seeking behavior patients were categorized into National TB program's (NTP) dream cases (18%), 'slow-but-sure patients' (34%), 'shopaholics' (45%), and the NTP's nightmare case (3%). Care seeking behavior patterns did not seem to be influenced by gender, place of residence and educational level. Factors that influenced care seeking behavior include income and advice from household members or friends. Family members based their recommendation on previous experience and affordability. FGD results suggest that the majority of people in the urban area preferred the hospital or chest clinic for diagnosis and treatment of TB whereas in the rural area private practitioners were preferred. Knowledge about TB treatment being free of charge was better in the urban area. Many community members from the rural area doubted whether TB treatment would be available free of charge.</p>	<p>DOTS facility after symptoms appeared and had consulted a number of providers. Their income and advice from household members and friends were factors that influenced their care seeking behavior most.</p>
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(25)	Prevalence and determinants of diabetes mellitus and impaired glucose tolerance in Indonesia (a part of basic health research/Riskesdas)	Mihardja L	To estimate the prevalence of diagnosed and undiagnosed diabetes mellitus (DM) and impaired glucose tolerance (IGT) in 15 year old and over in urban Indonesia and their association with risk factors such as age, smoking, physical inactivity, obesity, hypertension.	A national sample involving 24,417 participants living in urban Indonesia aged > 15 years were examined for 2 hours of plasma glucose concentrations in a cross sectional survey using the 75-g oral glucose. Diagnostic criteria of the World Health Organization 1999 and American Diabetes Association (ADA) 2003 were used to determine the prevalence of abnormal glucose tolerance. Data on age, smoking, physical activity were obtained from the personal interview, and obesity included body mass index and waist circumference and blood pressure were measured	The prevalences of diabetes in urban Indonesia was 5.7%, consisting of diagnosed diabetes mellitus (DDM) 1.5%, undiagnosed diabetes mellitus (UDDM) 4.2% and IGT 10.2%. The prevalence of DM was 6.4% in women and 4.9% in men. In the youngest group (15-24 years) 5.3% had IGT. Prevalence increases with age with a sharp rise from middle age (35-54 years).	Determinant factors for IGT and diabetes were age, smoking, obesity, central obesity and hypertension. these results indicate that diabetes has become a major public health problem in Indonesia and needs national strategies to screen, prevent and treat the disease.
(26)	Barriers to kidney transplants in Indonesia: a literature review	Bennett, P.N. and Hany, A Deakin University	The purpose of this study was to explore the health care literature to identify barriers to kidney transplants.	Health care databases were searched (CINAHL, Medline, EBSCOhostEJS, Blackwell Synergy, Web of Science, PubMed, Google Scholar and Proquest 5000) using the search terms: transplant, kidney disease, renal, dialysis, haemodialysis, Indonesia and nursing. The search was limited to English and Indonesian language data sources from	The results of our search identified 6 articles that met our criteria. Costs are the major barrier to kidney transplant in Indonesia, follow by cultural beliefs, perception of the law, lack of information and lack if infrastructure. In addition increased kidney disease prevention strategies are required.	There are many complex socio-economic, geographical, legal, cultural and religious factors that contribute to low kidney transplant rates in Indonesia. Although an increase in transplantation rates will require strategies from various agencies,

				1997 to 2007. Reference lists of salient academic articles were hand searched.		health care professionals, including nurses can play a role in overcoming some barriers. Community education programs, improving their own education levels and by increasing empowerment in nursing we may contribute to improved kidney transplant rates in Indonesia.
(27)	The tobacco excise system in Indonesia: Hindering effective tobacco control for health	Sarah Barber World Health Organization, 410 Dongwai Diplomatic Office Building, No. 23 Dongzhimenwai Dajie Avenue, Chaoyang District, Beijing 100 600 China	This paper describes the tobacco excise structure in Indonesia from 2007 to 2009.	Comprehensive tobacco control policies include high taxes.	The design of the tobacco excise system contributes to neutralizing the effect of a tax increase on consumption. Wide gaps in tax rates allow for the availability of low-priced products, and consumers can substitute to cheaper products in response to price increases. There has been no systematic increase in the tax rates, which promotes affordable of tobacco products. Firms can reduce their prices at point of sale and absorb the tax increase instead of passing it onto consumers. Tiered tax rates by production scale allow firms to evade paying the highest tax	Increases in tobacco excise rates in Indonesia may not have a large health impact under the current system of tax administration.

					brackets legally, thereby increasing profit margins while reducing prices at point of sale.	
(28)	Dietary patterns and risk of oral cancer: A factor analysis study of a population in Jakarta, Indonesia	Amtha R, Zain R	to determine the association between dietary pattern and oral cancer in a Jakarta population using factor analysis.	A matched case-control, hospital-based study of oral cancer was conducted in Jakarta population. The sample included 81 cases and 162 controls. Dietary data were collected using food frequency questionnaire and factor analysis was performed on 15 food groups resulting in four principle factors/components being retained. The first factor “preferred” was characterized by fast food, fermented food, canned food, snacks high in fat and sugar, cooked and raw vegetables, and seafood. The second factor labeled “combination” was loaded by the intake of dairy product, red meat, white meat and fruits. The third factor labeled “chemical related” was loaded by processed food and monosodium glutamate and the fourth principle component consisted of drinks and grain was labeled as “traditional”. The conditional logistic	The consumption the highest tertile of the “preferred” pattern increased the risk of oral cancer by two-times compared to the lowest tertile of consumption (28). The chemical related” pattern showed higher risk of about threefold (aOR = 2.56; 95% CI = 1.18–5.54), while the “traditional” pattern showed an increased of risk by twofold (aOR = 2.04; 95% CI = 1.01–4.41). In contrast, the “combination” pattern displayed protective effects in relation to oral cancer (aOR = 0.50; 95% CI = 0.24–1.00).	This finding suggests that factor analysis may be useful to determine the diet pattern of a big set of food type and establish the correlation with oral cancer.

				regression was done using STATA 8 to obtain the odds ratio (OR) of highest tertile of each component retained from factor analysis and the ORs were then adjusted with risk habits.		
(29)	Effect of homocysteine and antioxidants on peroxidation lipid of essential hypertension in Central Java, Indonesia	Sunarti Department of Biochemistry, Faculty of Medicine, Gadjah Mada University	This study is aimed at finding out the nature of the interaction effect between homocysteine and antioxidant vitamins on malondialdehyde level in essential hypertension.	This study was a case-control nested to “Surveillance of Non-Communicable Diseases” in Purworejo, Central Java. The subjects were men, essential hypertension and 20-60 years old that have normal value of urine creatinine, blood glucose, cholesterol and triacylglycerol. They have been take antihypertension drugs. The blood glucose, cholesterol, triacylglycerol, urine creatinine, vitamin C and malondialdehyde (MDA) levels were measured by spectrophotometer. Whereas the total plasma homocysteine and vitamin E were determined by HPLC.	The homocysteine level in the cases was higher than that of the control and was significantly different (P=0,027). There were not significantly different of the vitamin C, vitamin E, and MDA between the cases and the control (P=0.538, P=0.390, and P=0.536) respectively. The MDA was positively correlated with homocysteine (P=0.000) and negatively correlated with vitamin E (P=0.029), but it was not negatively significant correlated with vitamin C (P=0.067). The correlation had $r= 0.417$; $R^2=0.174$ and $F=7.713$.	The high homocysteine level is one of hypertension risk factors and its effect through oxidative stress. The effect can be prevented by antioxidant vitamins, specially vitamin E.
(30)	Community response to avian flu in Central Java, Indonesia	Siwi Padmawati Mark Nichter mnichter@email.arizona.edu		This focused ethnography was initiated as a pilot study in preparation for a more rigorous study of avian flu being designed to examine shifts in community behaviour and preparedness over time	This pilot study suggests that it is more appropriate to think of avian flu as a bio-social and bio-political challenge for Indonesia than merely an epidemiological challenge involving a disease	we call for research on avian flu preparedness attentive to Indonesia’s decentralized form of political rule and the social organization of

					<p>of zoonotic origin. Our examination of popular perceptions of avian flu in Central Java reveals important differences of opinion about which types of fowl are responsible for avian flu transmission and the degree of risk H5N1 poses to humans. The opinions of backyard farmers and commercial poultry farmers are motivated by different forms of practical logic and are differentially influenced by media accounts, government education programmes, foreign aid and rumours about who stands to profit from the disease. Rumours reflect collective anxieties about globalization, the agenda of big business and the trustworthiness of the national government. We also illustrate how a commodity chain analysis can assist in the identification of different stake-holders in the informal and formal poultry industries. The position of each stake-holder needs to be considered in any comprehensive investigation</p>	<p>communities so that clear lines of communication and command can be established and mutual assistance mobilized.</p>
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					of avian flu. An economic analysis of the capital investment of stake-holders provides insight into how each responds to government directives about the reporting of dead chickens, vaccinating birds etc	
(31)	Case study of tobacco cultivation and alternate crops in Indonesia	Prajogo U Hadi Indonesian Center for Agriculture socio - economic and policy, department of Agriculture, Bogor Institute of Agriculture	To conduct an analysis of comparative profitability of growing tobacco versus other crops, to understand the reasons why farmers continue to grow tobacco or switch to other crops, to analyze the marketing of tobacco products, and to provide suggestions for helping farmer to shift from tobacco to alternative crops. To give a broader view, this study also makes a review on changes in world and Indonesian tobacco economy.	Two majors tobacco producing regencies were selected for field survey, namely Jember Regency in East java representing regions with ordinary tobacco variety planted on wetland, and Temanggung Regency in Central Java representing regions with special tobacco variety planted on dry land. Respondents are composed of farmers currently growing tobacco and other crops (multi-commodity farmers), and former tobacco farmers. Focus Group Discussion (FGD) approach was employed for gathering data.	In the global market, tobacco would become less attractive, particularly in the developed countries, but in general remain economically prospective in the near future. In the longer run, however, under the harder pressures of anti-tobacco movements, less government support to production programs, increased excise tax imposition, increased people's awareness about the importance of healthy live, reduced protection according to WTO agreements, the quality tobacco production, consumption, export and import is expected to decline. There have been shifts from developed to developing countries in production, consumption, export and	In agro-ecological, agronomic and farmer's skill viewpoint, shift from tobacco to alternate crops cultivations would face no serious problems. This is because tobacco farmers also cultivate other crops (wetland rice, hybrid corn, red chili and soybean in Jember Regency and potatoes or other vegetables crops in Temanggung Regency). No pure tobacco farmers can be found, therefore, because tobacco is cultivated only for one season, while in other seasons the same land are cultivated with other

					<p>import. Production in developing countries grows faster than in developed countries. Consumption in developing countries rapidly increases, while it developed countries decreases. Moreover, export and import from both developed and developing countries similarly experience slow growths. The shifts of production and consumption from developed to developing countries were triggered by: (a) More intensive anti-tobacco movement in developed countries; (b) Faster decreased government support in developed countries; (d) Lower production cost in developing countries; (e) Lack of more profitable alternate crops in developing countries; (f) Improved infrastructure conditions in developing countries; and (g) Factory relocation from developed to developing countries. Since China is the world largest producers as well as consumer, changes in its production and consumption would affect world</p>	<p>crops. Economic justification is the most crucial consideration in crops selection. The recommended crop rotations are: (a) Wetland Rice – Wetland Rice – Hybrid Corn; (b) Wetland Rice – Wetland Rice – Red Chili; (c) Wetland Rice – Hybrid Corn – Red Chili; or (d) Wetland Rice – Red Chili – Hybrid Corn. For Temanggung Regency, the following crop rotations are suggested: (a) Potatoes – other vegetable – other vegetable; or (b) Other Vegetable – Potatoes – Other Vegetable.</p> <p>To succeed a massive shift from tobacco to alternate crops, a comprehensive approach is needed, including provision of financial support by banking system, extension services, marketing services and farmer’s organization preparation. The new</p>
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					<p>production and consumption. In Indonesia, the increasing anti-tobacco movement (despite not strong as in occurring in developed countries), the less government support to tobacco production, increasing restrictions of smoking space, increasing people's awareness of smoking dangers on human health, and the intensified levies collection on tobacco products, the tobacco production and consumption is expected to decrease in the long run.</p> <p>The role of tobacco sector and cigarette industry sector in the Indonesian economy in terms of output value creation, value added and labor absorption is less significant. However, both sectors have large multiplier effects. This is because these sectors have linkages with other sectors. The labor multiplier effects of the sectors are weak. From the forward and backward linkages viewpoint, the tobacco sector is able to pull its upstream sectors and to</p>	<p>credit scheme called Agriculture Financing Service Schemes (Skim Pelayanan Pembiayaan Pertanian, SP3) needs to be effectively provided as financial incentives to farmers who are willing to replace tobacco with other crops.</p>
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					<p>push its downstream sectors to develop even though with insignificant rate.</p> <p>Meanwhile, the cigarette industry is able only to push its downstream sectors.</p> <p>These sectors (especially cigarette industry) contribute about 7% of government's domestic income, but it is more depleting rather than creating foreign exchange in international trade.</p> <p>The tobacco farmers in the survey locations of Jember Regency (East Java) not only cultivate tobacco, but also other crops such as rice, hybrid corn red chili or soybean under the specific crop rotation arrangement on lowland, where tobacco is generally cultivated in the second cropping season (after rainy season rice). In the other survey location of Temanggung Regency, farmers also grow other crops, particularly potatoes on the sloping dry land, where tobacco is generally cultivated in the second season (after rainy season potatoes).</p> <p>Farmers who maintain</p>	
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					<p>tobacco cultivation are justified by the high profit of the crop. Compared to wetland rice, hybrid corn, red chili and soybean, tobacco cultivation offers much higher profit in Jember Regency. In Temanggung Regency, on the other hand, potatoes cultivation for producing seeds gives comparably high profit with tobacco. There are farmers who exit from tobacco cultivation and shift to other crops. This is primarily because of uncertain tobacco price, unsound market condition, ever increasing production costs and no longer government support to tobacco development. The Ministry of Agriculture does not facilitate any attempts to develop tobacco cultivation.</p>	
(32)	Global Youth Tobacco Survey (GYTS) Indonesia	Tjandra Y Aditama doctjand@indosat.net.id	The Global Youth Tobacco Survey (GYTS) was developed to provide data on youth tobacco use to countries for their development of youth based tobacco control programs.	Data in this report can be used as baseline measures for future evaluation of the tobacco control programs implemented by the Ministry of Health.	This 2006 Indonesia GYTS report show that more than 1 in 10 (12.6%) students currently smoke cigarettes with boys (24.5%) significantly higher than girls (2.3%). Among the current smokers students,	Tobacco control in Indonesia will likely not move forward until the government evaluates and strengthens existing laws, considers passing new strong laws, and develops

					over 7 in 10 (75.9%) of them report that they desire to stop smoking now. Regarding SHS, over 6 in 10 (64.2%) students reported they were exposed to smoke from others in their home during the week before the survey. In the impact of media, over 9 in 10 (92.9%) students had seen a lot of advertisements for cigarettes on billboards in the past month and over 8 in 10 (82.8%) had seen a lot of advertisements for cigarettes in newspapers or in magazines	protocols for enforcing all laws. The Indonesian government also should strongly consider accession to the WHO FCTC.
(33)	Determinants of blood pressure among Indonesian elderly individuals who are of normal and overweight: a cross sectional study in an urban population	Kamso S	The primary purpose of this study was to investigate various determinants of blood pressure in Indonesian elderly who differed in body composition.	A cross sectional study was undertaken in Jakarta on 556 elderly using multistage random sampling. Data were collected through interview using structured questionnaires, anthropometric measurements, biochemical blood analysis, and blood pressure measurements. Daily nutrient intake was analyzed using the World Food 2 Dietary Assessment Program. General Linear Model and Multiple linear regression analysis were performed to determine determinants of systolic and diastolic blood pressure.	Monounsaturated fatty acid, saturated fatty acid, and sodium intake, plasma total cholesterol level, the ratio of total cholesterol to HDL-cholesterol and a sport Index were determinants of blood pressure in the normal weight elderly individuals, while potassium intake, calcium intake and BMI were determinants of blood pressure in the overweight elderly individuals.	

(34)	Global Health Professional Survey (GHPS) Indonesia 2006	Tjandra Y Aditama Department of Pulmonology & Respiratory Medicine Faculty of Medicine University of Indonesia [doctjand@indosat.net.id]	to collect data on tobacco use and cessation counseling among health professional students in all WHO Member States.	GHPS is a school based survey of third year student in the Faculty of Medicine, Dentistry, Nursing or Pharmacy. In 2006 we perform GHPS in medical students. GHPS consist of 51 questions on demographics, prevalence of cigarettes smoking and other tobacco use, knowledge and attitude about tobacco use, exposure to secondhand smoke, desire for smoking cessation and training received regarding patient counseling on smoking cessation technique.	Our data showed that 48.4 % of Indonesian medical students has ever smoke cigarettes, even 1 or 2 puffs only in which 73.6% who ever smokers start their smoking habit before the age of 15. Result from this survey showed that almost 80% (78.2%) of medical students in Indonesia did not receive formal training in smoking cessation counseling, even though almost all of them (95.5%) want such training to be included in their curricula.	Medical Faculties in Indonesia should develop a teaching module of smoking cessation consultation technique to be taught to their medical students in the near future as a part of their normal curricula.
(35)	Direct Medical Costs of Tobacco Use in Indonesia in 2005	Kosen, S. NIHRD Ministry of Health	for advocacy purposes in tobacco control, the NIHRD conducted medical cost estimation of diseases attributed to tobacco use.	to estimate the number of cases in 2005, the prevalence of diseases attributed to tobacco use (based on ICD-10) were obtained from the National Health Survey 2001 and 2004. Demographic data for 2005 was projected from the 2000 Population Census. Average medical costs of individual disease attributed to tobacco use and average length of stay, were collected from the Central	in 2005 the medical costs of tobacco use are in the amount of 12.7 trillion rupiahs or equal to 1.27 billion US Dollars. The main direct medical costs (in US Dollars) were contributed by patients hospitalized for Neoplasm (12.7 million), Cardiovascular Diseases (353.5 million), Respiratory Diseases (828.6 million), and other diseases (82.2 million).	tobacco use causes a severe economic toll on family and society resources, as well as public sector health care resources; and affects the government ability to devote limited resources to other social priorities.

				Public Hospital in Jakarta. The costs include: emergency services, surgical services, drugs and medical supplies, radiological services (X-Ray, CT Scan, MRI), pathological services, ECG, clinical laboratory services and cost of hospital ward based on 2nd class tariff.		
(36)	Motivating patients to attend smoking cessation sessions: experiences from a randomized trial in Indonesia	Nawi Ng	To test whether patients suffering from lung diseases require an educational intervention to motivate them to attend a smoking cessation counseling session, or whether a practitioner's directive suffices.	A two-arm randomized pilot study was conducted in a lung clinic in Jogjakarta, Indonesia. In one arm, patients were asked to receive counseling by a health care provider. In the second arm, patients received an education session employing culturally sensitive tobacco messages prior to the invitation to receive counseling. The primary outcome of the study was whether a patient agreed to participate in a smoking cessation session designed to help them quit.	276 patients participated in the study: 128 in the pre-counseling education arm and 134 in the counseling only arm. Patients in both arms were similar in terms of age and level of smoking. Only 5 out of the 276 patients in the study refused to participate in counseling. . However, < 5% of patients returned for a follow up counseling session. In Javanese culture, it is impolite for patients to refuse a directive from health staff of higher social status. Advice to attend a clinic based smoking cessation counseling session was effective with or without a pre-counseling educational intervention. Poor attendance at a follow up cessation session suggests adherence to practitioner's advice is time	Future research is needed to determine whether clinic based counseling sessions and/or the provision of culturally-tailored cessation materials influences patients' future quit attempts.

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Annex 3 – Table of SDH Policies and Policy Reviews

Responsible Ministry	Name and year of policy document	SDH-relevant components (incl. details of actions, people affected, etc)	Groups/ individuals in support of policy, and why	Groups/ individuals in opposition to policy, and why	Policy review date (if known)
Ministry of Health	Law No. 36 of 2009 on Health	Regulate advertising, promotion and sponsorship of tobacco products, smoke free places, and packaging and labeling of smoked tobacco products.	<ul style="list-style-type: none"> • Tobacco Control Organizations • Anti tobacco activists • Indonesian Consumer Foundation • Indonesian Public Health Association • National Commission on Children Protection • National Commission on Tobacco Control • Indonesian Heart Foundation 	<ul style="list-style-type: none"> • Tobacco Industries • Groups of Tobacco farmers • Groups of Tobacco Users 	<ul style="list-style-type: none"> • Decision No. 57/PUU-IX/2011 (17 April 2012), Article 115 (1) (Smoke-free zones) - elimination of word 'can' on the explanation of the article ("... specifically for the workplace, public places, and elsewhere CAN provide special places for smoking"). • Article 113 (1) (tobacco is a commodity which contains an addictive substance) - on going (case No 24/2012). • Decision Number 34/PUU-VIII/2010 (Article 113 (2), "...tobacco,

					<p><i>products contain tobacco..." and article 114 on tobacco warning.</i></p> <ul style="list-style-type: none"> • <i>Decision Number 12/PUU-VIII/2010 (June 27, 2011) Concerning Judicial Review of Law Number 36 Year 2009 (Article 28H paragraph (1) which reads, "Every person shall have the right to live in physical and spiritual prosperity, to have a home and to enjoy a good and healthy environment, and shall have the right to obtain health service".)</i>
Ministry of Health	Government regulation on Health Security for Tobacco (PP No. 19 of 2003)	Regulation on tobacco control, regulating public smoking; packaging and labeling; and advertising, promotion and sponsorship of smoked tobacco products, among other things.	<ul style="list-style-type: none"> • Tobacco Control Organizations • Anti tobacco activists • Indonesian Consumer Foundation • Indonesian Public Health Association 	<ul style="list-style-type: none"> • Tobacco Industries • Groups of Tobacco farmers • Groups of Tobacco Users 	

			<ul style="list-style-type: none"> • <i>National Commission on Children Protection</i> • <i>National Commission on Tobacco Control</i> • <i>Indonesian Heart Foundation</i> 		
<i>Ministry of Information and Broadcasting</i>	<i>Law No. 32 of 2002 on Broadcasting</i>	<i>Advertising, promotion and sponsorship of tobacco products</i>	<ul style="list-style-type: none"> • <i>Tobacco Control Organizations</i> • <i>Anti tobacco activists</i> • <i>Indonesian Consumer Foundation</i> • <i>Indonesian Public Health Association</i> • <i>National Commission on Children Protection</i> • <i>National Commission on Tobacco Control</i> • <i>Indonesian Heart Foundation</i> 	<ul style="list-style-type: none"> • <i>Tobacco Industries</i> • <i>Advertising Industries</i> 	
<i>Ministry of Information and Broadcasting</i>	<i>Law No. 40 of 1999 on Press</i>				
<i>Minister of Tourism and the Creative Economy</i>	<i>Law No. 33 of 2009 on Film</i>				
<i>Ministry of Health & Ministry of Home Affairs</i>	<i>The Joint Regulation of the Minister of Health and Ministry of Home Affairs No. 188/MENKES/PB/I/2011 on Guidelines for Regions Without Smoking (KTR)</i>	<i>Terms of smoking rooms.</i>	<ul style="list-style-type: none"> • <i>Tobacco Control Organizations</i> • <i>Anti tobacco activists</i> 	<ul style="list-style-type: none"> • <i>Tobacco Industries</i> • <i>Tobacco Users</i> 	

			<ul style="list-style-type: none"> • <i>Indonesian Consumer Foundation</i> • <i>Indonesian Public Health Association</i> • <i>National Commission on Children Protection</i> • <i>National Commission on Tobacco Control</i> • <i>Indonesian Heart Foundation</i> 		
<i>Ministry of Health</i>	<i>Law No. 40 of 2004 on National Social Security System</i>	<i>Universal Coverage (Prolani - DM, hemodialisa, dll cari yang lain</i>			

Ministry of Health	Law No. 24 of 2011 on Social Security Organizing Body	<p>Mandate of Law No. 40 of 2004 (Universal Coverage):</p> <ul style="list-style-type: none"> • The law will create a single state entity in 2014 that will cover health care. Those with a regular income will have to pay monthly premiums, while the government will pay premiums for people who are poor or unemployed. • In 2015 a second BPJS will cover life insurance, work accident insurance, civil service pensions and old-age pensions. 	<ul style="list-style-type: none"> • Employees • Poor people 		
Ministry of Health	Decision of the Minister of Health 430/MENKES/SK/IV/2007 (10 April 2007)	Guidelines for cancer control			
Ministry of Health	Decision of the Minister of Health 1022/MENKES/SK/XI/2008 (3 November 2008)	Guideline to control chronic obstructive pulmonary disease			
Ministry of Health	Regulation of the Minister of Health 1097/Menkes/Per/VI/2011 (7 June 2011)	Technical guidelines for primary health care of community health insurance			