2015 INDONESIA HEALTH PROFILE

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MINISTRY OF HEALTH REPUBLIC OF INDONESIA
2016

351.077 Ind p

Catalog in Publishing. Ministry of Health RI

Indonesia. Ministry of Health RI. Secretariat General
Indonesia Health Profile 2015. --
Jakarta : Ministry of Health RI. 2016

ISBN 978-602-235-911-1
1. Judul I. HEALTH STATISTICS

This book is published by
Ministry of Health Republic of Indonesia
Jalan HR. Rasuna Said Blok X-5 Kav 4-9, Jakarta 12950
Phone no: 62-21-5229590, 5221432, 5277168
Fax no: 62-21-5277168
E-mail: datainformasi.pusdatin@kemkes.go.id
Website: http://www.kemkes.go.id

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FOREWORD

SECRETARY GENERAL OF THE MINISTRY OF HEALTH, RI

Praise to the One Almighty God for the completion of this Indonesia Health Profile 2015. We express our sincerest gratitude to all who have contributed in the preparation.

Indonesia Health Profile is a comprehensive source of data and information related to current health condition, provided by the technical units in the Ministry of Health and other relevant institutions such as the Statistics-Indonesia (BPS) and the National Population and Family Planning Board (BKKBN).

Readers can benefit from the data and information concerning Demography, Health Facilities, Health Personnel, Health Financing, Health of Indonesian Families, Disease Control, and Environmental Health. The data and information presented in the Profile may be valuable in evaluating health development outcome among provinces and assessing achievement of health development programs in Indonesia, and may be used as a baseline data in planning future health development programs.

The Indonesia Health Profile 2015 is published on book version and electronic file, which is available at www.kemkes.go.id. We hope this publication will give significant benefit for all stakeholders: the government, professional organizations, academic staff, private sector, as well as the society. It is also expected to positively contribute to the health development in Indonesia. Feedback and suggestions are welcome for further improvement.

Jakarta, August 2016
Secretary General
Ministry of Health, RI

dr. Untung Suseno Sutarjo, M.Kes

MENTERI KESEHATAN
REPUBLIK INDONESIA

ACKNOWLEDGMENT

MINISTER OF HEALTH, RI

The Ministry of Health is committed to organizing the health development to improve the quality of public life in accordance with the vision and mission of the President of the Republic of Indonesia. The purpose of the health development is to raise awareness, willingness and ability to live a healthy life to achieve the highest health standard. The effectiveness and efficiency as well as the implementation of health development are strongly influenced by program policies and strategies, appropriate approach and clear goals. Support from accurate and swift data and information is very decisive in policy making and strategy of health development.

I am glad to welcome the publication of Indonesia Health Profile 2015, as it is a source of comprehensive data and information of health development. Such publication will definitely serve as a good basis for decision making in health management. The Health Profile is also part of the commitment in providing access to balanced and responsible information and education on health.

It is in that sense that Indonesia Health Profile should continuously improve itself, increasing its quality in its punctuality, validity, comprehensiveness, and data consistency, so that in the future Indonesia Health Profile can be published in a timely manner. To that end, the commitment to data and information integration and coordination between central and regional governments still needs to be improved.

I would like to express my sincerest and highest gratitude and appreciation to all parties that have contributed in the preparation of Indonesia Health Profile 2015, especially data management personnel at national, regional, and cross-sectoral levels. It is my expectation that all stakeholders create a synergy in order to achieve data-based goals of the health development.

Jakarta, August 2016
Minister of Health, RI

Prof. Dr. dr. Nila Farid Moeloek Sp.M(K)

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CHAPTER I
DEMOGRAPHY

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DEMOGRAPHY

Indonesia is geographically lying between two continents (Asia and Australia) and between two oceans (the Indian Ocean and the Pacific Ocean). It is astronomically located between North Latitude 6° to South Latitude 11° and West Longitude 95° to East Longitude 141° which includes a chain of islands from Sabang to Merauke. Based on the data from Geospatial Information Agency, Indonesia is the largest archipelago in the world, incorporating 13,466 islands, land area of 1,922,570 km^2 and waters of 3,257,483 km^2.

Based on the Regulation of the Minister of Home Affairs No. 39 Year 2015 regarding Codes and Data of Administrative Regions, Indonesia is administratively divided into 34 provinces, 514 districts/municipalities (comprising 416 districts and 98 municipalities), 7,094 sub-districts, 8,412 administrative villages (*Ind: kelurahan*) and 74,093 villages. A new province, North Kalimantan, was created in 2013, as an expansion from the province of East Kalimantan, with five districts/municipalities namely Districts of Malinau, Bulungan, Tana Tidung, Nunukan and Municipality of Tarakan. The division of administrative regions by province in 2015 can be seen in Annex 1.1.

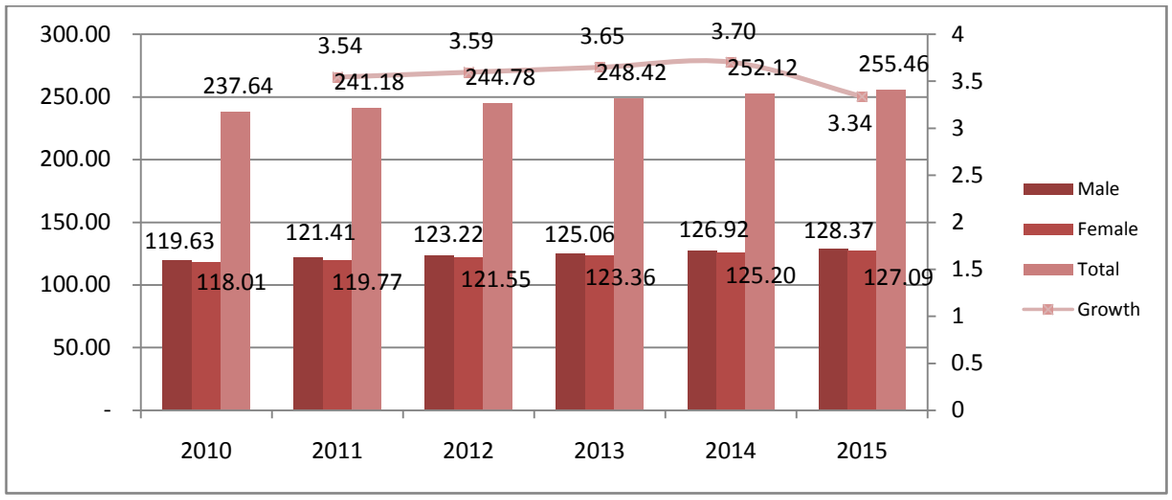
In this chapter we will discuss population, economy, education and human development index (HDI).

A. POPULATION

The population in 2015 is estimated to be 255,461,686 in habitants, which consists of 128,366,718 males and 127,094,968 females. The figure is the result of calculations performed by the Center for Data and Information of the Ministry of Health, guided by the Statistics - Indonesia using the geometric method. This method uses the principle that the basic demographic parameters, which include fertility, mortality, and migration, have constant annual growth.

Figure 1.1 shows an increase in the population of Indonesia from 2010 to 2015. From 2010 to 2014 the population grew from 3.54 million per year to 3.70 million per year. In 2015 the growth declined slightly compared to that of 2014 to 3.34 million per year. The sex ratio in 2015 is 101, which means that there are 101 males per 100 females.

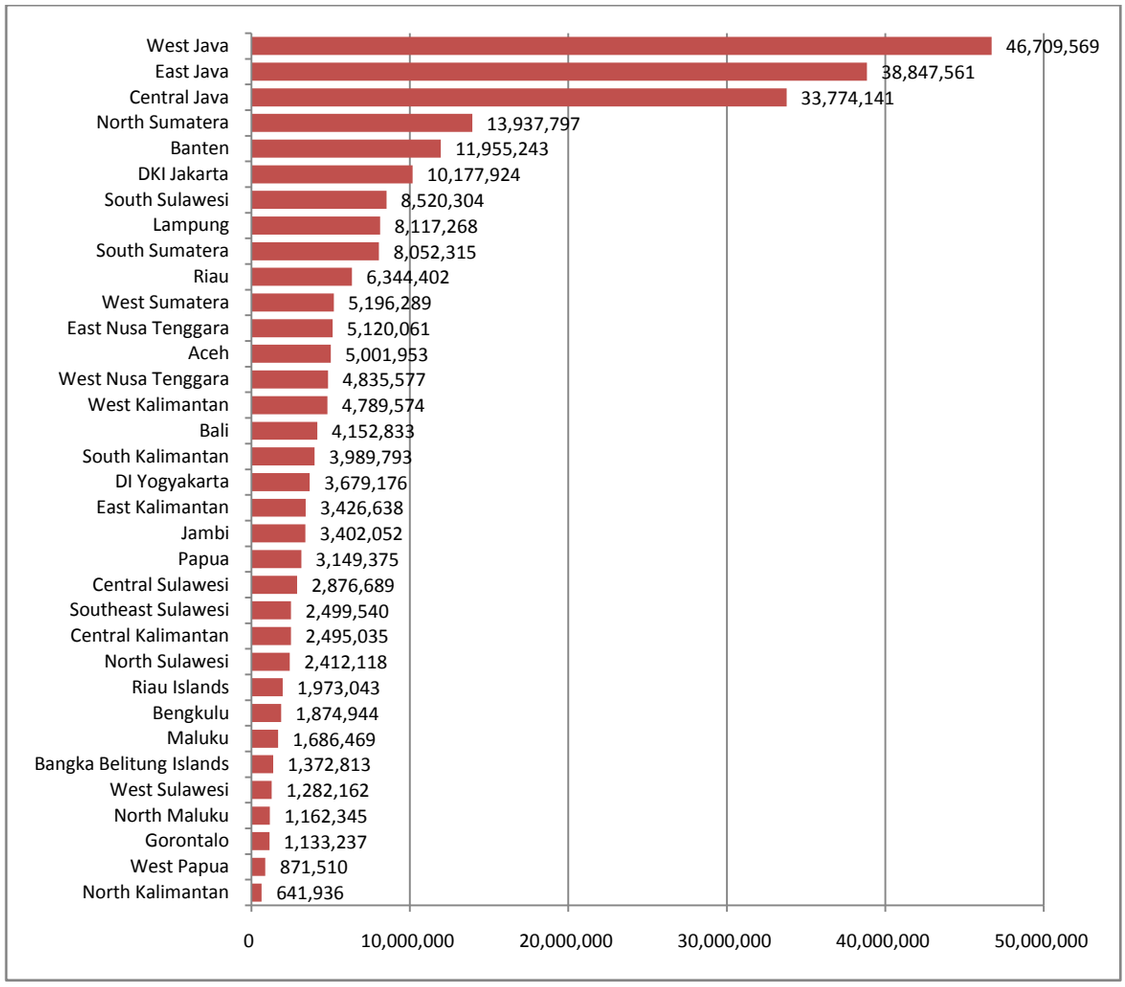
FIGURE 1.1
POPULATION OF INDONESIA (in Millions)
BY SEX, 2010 – 2015



Source: Statistics - Indonesia, 2010, Result of Population Census;
Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

In Figure 1.2, based on the result of estimation, the population of Indonesia is the highest in the province of West Javawith 46,709,569 inhabitants, while the lowest in the province of North Kalimantan with 641,936 inhabitants.

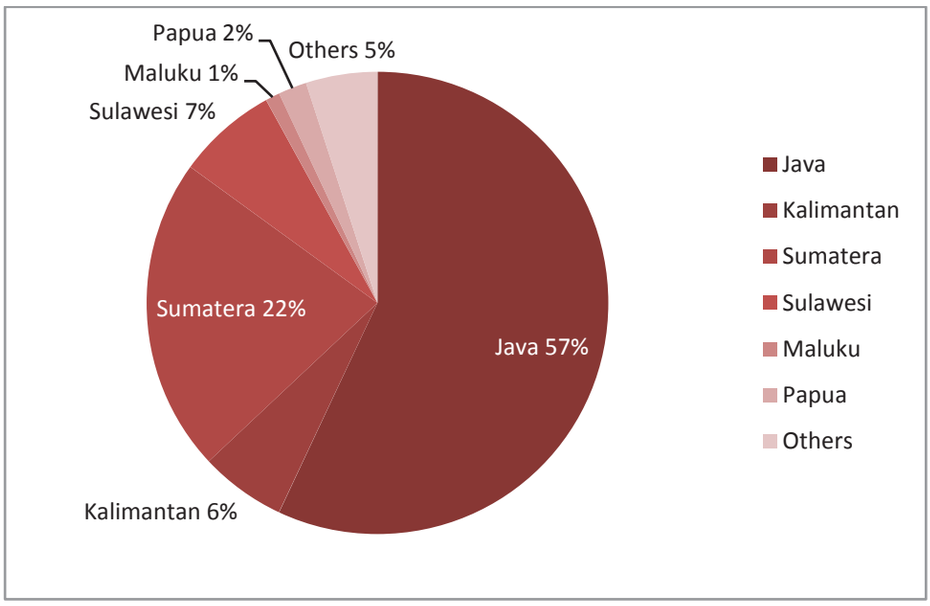
FIGURE 1.2
POPULATION OF INDONESIA BY PROVINCE, 2015



Source: Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

We can see from the figure below that the island of Java is the region with the highest population in Indonesia. The lowest population is located in the eastern regions of Indonesia, namely Maluku and Papua.

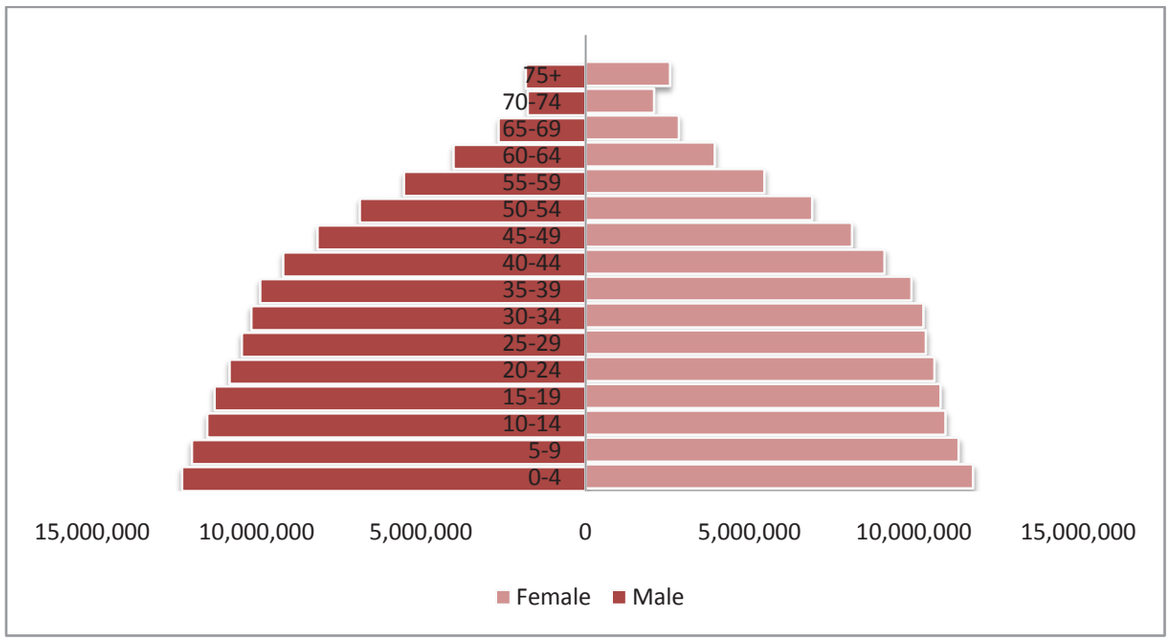
FIGURE 1.3
DISTRIBUTION OF POPULATION OF INDONESIA, 2015



Source: Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

The age structure of the population by sex can be described in population pyramid. Based on the estimation, we can draw up a pyramid for the 2015 population. The base of the pyramid shows the range of the population; the left body of the pyramid shows the number of males and the right one the females. The pyramid represents the structure of the population comprising the young, the adults, and the elderly. This population structure is the basis for population, social, cultural, and economic policies.

FIGURE 1.4
POPULATION PYRAMID OF INDONESIA, 2015

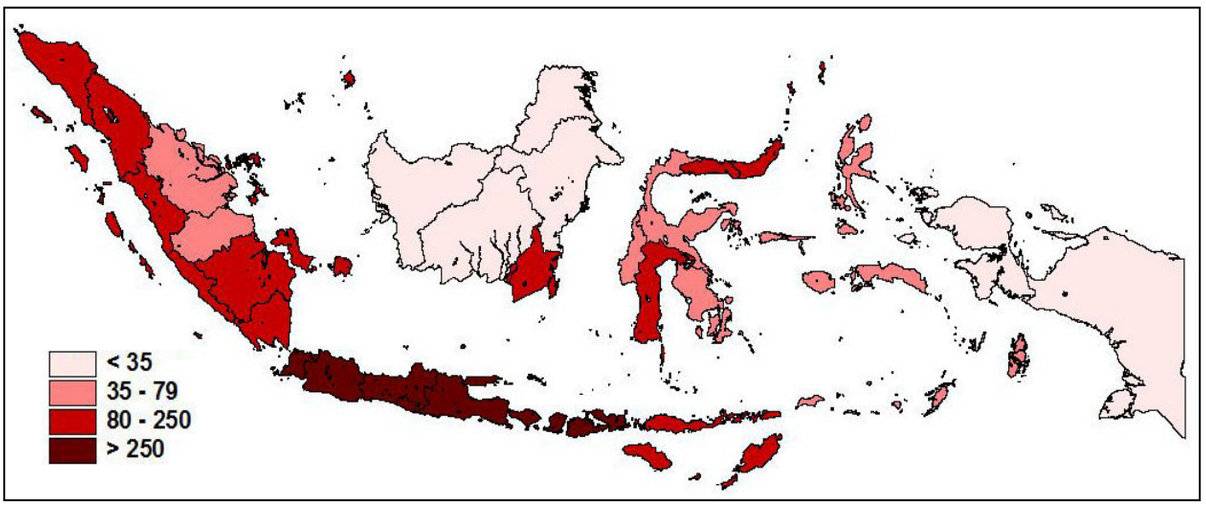


Source: Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

Figure 1.4 shows that the structure of the population in Indonesia can be described as youth bulge. We can see that there are more inhabitants at the age of 0-14 (the young) than those older. The graph is wider at the young, which proves that the population of Indonesia falls under youth bulge category. The top of the pyramid is shorter, showing that the death rate is still high in the elderly. This requires better policy regarding the condition of the elderly.

The concentration of population in an area can be studied using population density. Population density represents the average number of inhabitants per one square kilometer. The greater the density, the more densely inhabited the areas are. The average density of population in Indonesia in 2015, based on the results of the population estimation,is 133.5 inhabitants per km^2. It is an increase from the previous year of 132 inhabitants per km^2. The population density is a useful reference in realizing the equalization and distribution of the population. The population density in 2015 by province can be seen in Annex 1.4.

FIGURE 1.5
MAP OF POPULATION DENSITY OF INDONESIA, 2015



Source: Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

In Figure 1.5, we can see that the population density in Indonesia has not been evenly distributed. The highest population density in the island of Java, namely DKI Jakarta, amounts to 15,327.97 inhabitants per km^2. The lowest population density is located in the province of North Kalimantan, amounting to 8.51 inhabitants per km^2. This is not much different from the statistics in the previous year. To ensure equal distribution of the population, the government has been implementing a number of ways, among others: (1) transmigration or moving the population from a densely populated region to a sparsely one; (2) employment equity by expanding industries, especially for provinces that are outside the island of Java; (3) controlling the population by reducing the number of births through family planning programs or establishing the youngest age of the first marriage.

Essential indicators related to the distribution of population by age, which are often used to determine the productivity of the population, is called Dependency Ratio. Dependency Ratio is a measure that states the ratio between the number of people who are non-productive (not yet productive (under 15 years old) and no longer productive (65 years old and over)) with those at their productive age (aged 15-64). This number can be used as an indicator which can roughly indicate the economic state of a country. The higher the dependency ratio, the heavier the burden on those of the productive age to finance those of the non-productive age. Likewise, the lower the dependency ratio, the less heavy the burden on those of the productive age to finance those of the non-productive age.

The Dependency Ratio of Indonesia in 2015 is 48.63. This means that every 100 productive inhabitants of Indonesia, in addition to bearing themselves, also have to bear 48-49 other people who are non productive.

Population as the determinant of the development needs serious attention. Development programs, including the development in the health sector, should be based on the dynamics of the population. Development efforts in the health sector are reflected in

health programs through promotive, preventive, curative and rehabilitative efforts. Health development is one of the efforts to improve public health. The responsibility of achieving optimal health status for the country does not solely lie on the health sector alone, but also on other related sectors such as education, economy, social and governance which also have a significant role. The right to proper health belongs to all citizens, which then leads to setting the targets and goals of national health development. Table 1.1 shows data on the population target of health development program in 2015 by sex.

Data on the population target of health development program is required by program managers primarily to plan and evaluate the achievement of health efforts that have been implemented. Data on the population target of health development program in 2015 by province are presented in Annexes 1.5, 1.6, 1.7 and 1.8.

TABLE 1.1
TARGET POPULATION OF HEALTH DEVELOPMENT PROGRAM IN INDONESIA, 2015

No	Target	Age Group/ Formula	Sex		Total
			Male	Female	
1	Life Births	-	-	-	4,893,435
2	Infants	0 Years Old	2,448,045	2,346,746	4,749,791
3	Under-Three Children	0 – 2 Years Old	7,348,945	7,045,809	14,403,754
4	Under-Five Children	1 – 4 Years Old	9,825,271	9,445,444	19,270,715
5	Under-Five Children	0 – 4 Years Old	12,273,316	11,792,190	24,065,506
6	Pre-School Age	5 – 6 Years Old	4,849,350	3,602,593	9,451,943
7	Children of First Grade of Elementary School Age or Equivalent	7 Years Old	2,388,714	2,260,214	4,648,928
8	Children of Elementary School Age or Equivalent	7 – 12 Years Old	14,040,775	13,340,905	27,381,680
9	Youth Population	< 15 Years Old	35,754,920	34,102,486	69,857,406
10	Productive-Age Population	15 – 64 Years Old	86,394,793	85,479,495	171,874,288

11	Non-Productive-Age Population	≥ 65 Years Old	6,217,005	7,521,987	13,729,992
12	Older Population	≥ 60 Years Old	10,234,499	11,450,827	21,685,326
13	High-Risk Older Population	≥ 70 Years Old	3,357,404	4,667,009	8,240,413
14	Reproductive-Age Women	15 – 49 Years Old	-	69,195,283	69,195,283
15	Immunized Reproductive-Age Women	15 – 39 Years Old	-	51,981,127	51,981,127
16	Pregnant Women	1,1 X Life Birth	-	5,382,779	5,382,779
17	Delivering / PostpartumWomen	1,05 X Life Birth	-	5,138,107	5,138,107

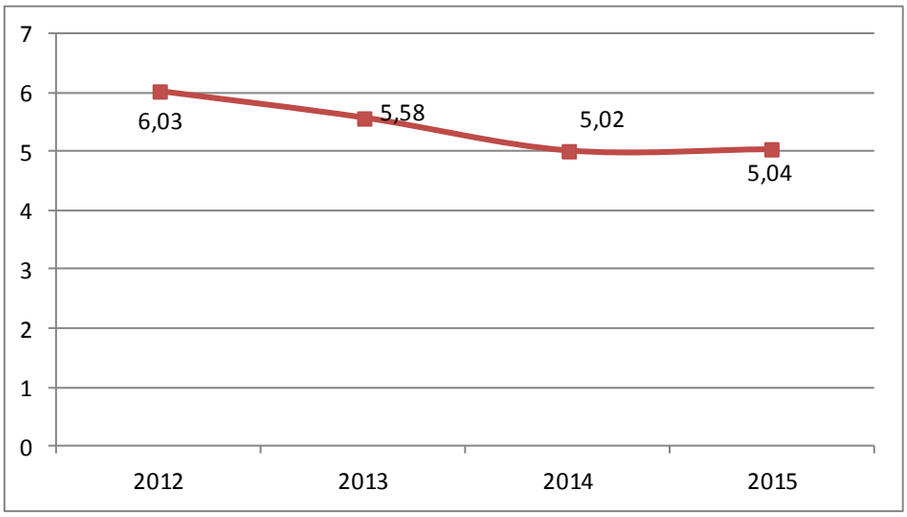
Source: Center for Data and Information, Ministry of Health RI, 2015, Result of Population Estimation

B. ECONOMY

Economy is one aspect that is measured in determining the success of a country's development. Based on the data from Statistics-Indonesia (*BPS* or *Badan Pusat Statistik*), the growth of Indonesia's Gross Domestic Product in 2015 at the prevailing prices amounted to 11,540.8 trillion rupiahs. Gross Domestic Product per capita in 2015—Gross Domestic Product at the prevailing prices divided by the number of population in the mid-year—reached 45.2 million rupiahs.

Figure 1.6 shows that the economic growth in Indonesia in 2015 amounted to 5.04%, a slight increase compared to the economic growth in 2014 but lower than that in 2012 and 2013. This was due to the then ongoing crisis in the global economy, despite constant recovery efforts in various major economies of the world. The efforts were at a pace that was not in line with expectations and was uneven, though, and were exacerbated by various structural problems in the domestic economy that has taken place in recent years. The structural problems include our exports which were still dominated by products based on natural resources, our food and energy security which were still low, our financial markets which were still shallow and our increasing dependence on external financing.

FIGURE 1.6
INDONESIA'S ECONOMIC GROWTH,2012 – 2015 (IN %)

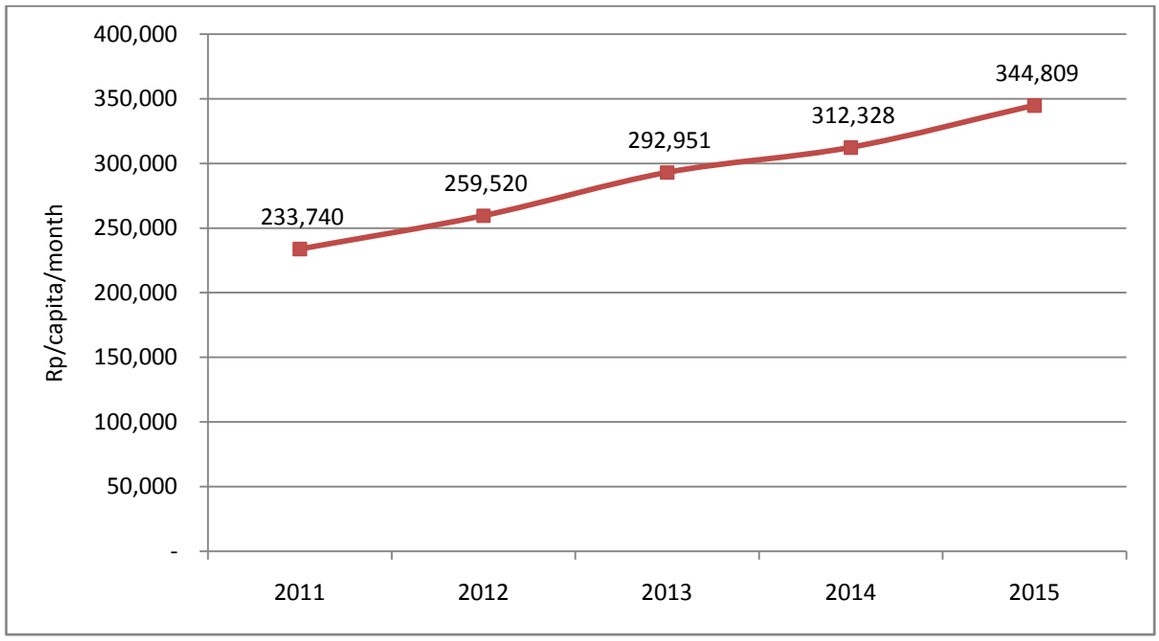


Source: Statistics - Indonesia, 2015

BPS measures poverty using the concept of basic need approach. Poverty is defined as a condition in which a person or a group of people are unable to meet their basic rights to maintain and develop a dignified life. Poverty is also understood as the inability of the economy of the population to meet the basic needs of either food or non-food, which are measured from the expenditure. The distribution of income is a measure of relative poverty. However, because the data for the income is difficult to obtain, expenditure data approach is used to measure income distribution.

Measuring poverty is done by specifying the standard value of minimum needs, both for food and for non-food, that must be met for someone to live decent lives. The standard value of minimum needs is used as a dividing line to separate between the poor and the non-poor. The dividing line is often called the poverty line. Population with monthly expenditure per capita lower than or below the poverty line is categorized as poor. Figure 1.7 shows an increase in the poverty line in Indonesia 2011-2015. The poverty threshold or level of monthly expenditure per capita in 2015 amounted to 344,809 rupiahs.

FIGURE 1.7
INDONESIA'S POVERTY LINE
2011 – 2015



Source: Statistics - Indonesia, 2015

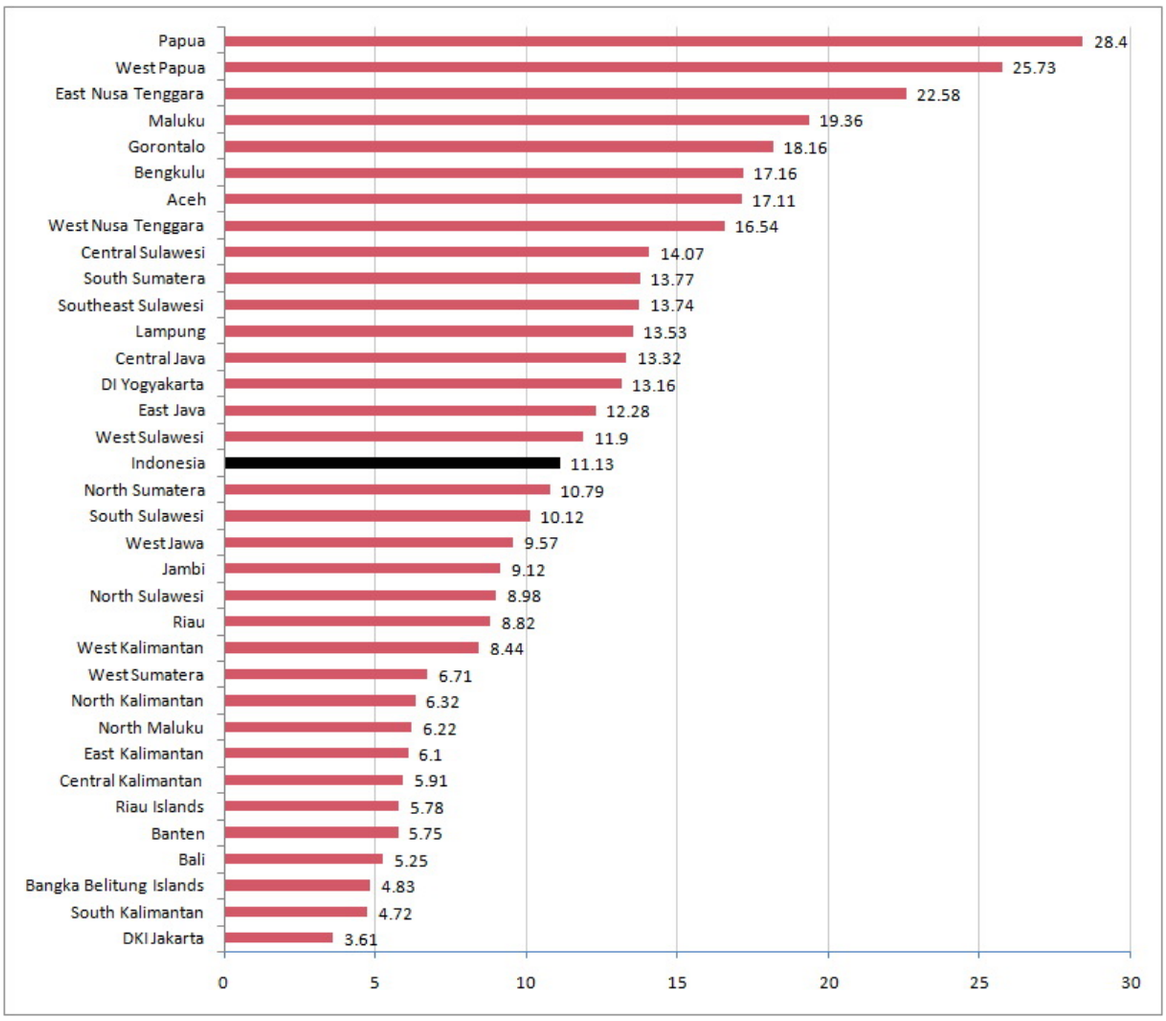
BPS measures poverty in March and September. In September 2015, the number of poor inhabitants in Indonesia amounted to 28.51 million people (11.13%), 0.08 million lower than that in March 2015 which amounted to 28.59 million (11.22%). Several factors contributed to the improvement of March-September 2015, which include the general inflation rate that tends to be low, the improvement in farmers' income, and the declining retail prices of some food commodities.

The number of the poor in rural areas decreased more than that in urban areas. During the period of March 2015-September 2015, the number of the poor in urban areas decreased by about 0.03 million people, while in rural areas it decreased by about 0.05 million people.

Most of the poor live in rural areas. In September 2015, the number of the poor in rural areas amounted to 62.76%, not much different from that in March 2015 which amounted to 62.74%.

The highest percentage of the poor by province in 2015 belonged to Papua (28.40%), West Papua (25.73%) and East Nusa Tenggara (22.58%). The provinces with the lowest percentage of the poor are DKI Jakarta (3.61%), South Kalimantan (4.72%) and Bangka Belitung Islands (4.83%).

FIGURE 1.8
PERCENTAGE OF THE POOR BY PROVINCE,2015



Source: Statistics - Indonesia, 2015

The distribution of the number and proportion of the poor by group of islands in 2012-2015 in the table below shows that the highest percentage of poor households are located in Java and Sumatra islands. Poverty is a problem both complex and multi dimensional; therefore, efforts to eradicate it must be comprehensive, covering various aspects of community life and implemented in an integrated manner.

TABLE 1.2
THE DISTRIBUTION OF THE NUMBER AND PROPORTION OF THE POOR BY GROUP OF MAJOR ISLANDS IN INDONESIA, 2012 – 2015

No	Group of Islands	2012		2013		2014		2015	
		Total (in thousands)	%	Total (in thousands)	%	Total (in thousands)	%	Total (in thousands)	%
1	Sumatera	6,177.2	21.6	6,190.1	21.7	6,070.4	21.9	6,309.1	22.1
2	Java	15,882.6	55.3	15,546.9	54.4	15,143.8	54.6	15,312.3	53.7
3	Kalimantan	932.9	3.3	978.7	3.4	972.9	3.5	994.0	3.5
4	Bali and Nusa Tenggara	1,989.6	7.0	1,998.1	7.0	2,004.5	7.2	2,181.6	7.7
5	Sulawesi	2,045.6	7.1	2,139.6	7.5	2,054.9	7.4	2,192.8	7.7
6	Maluku and Papua	1,626.8	5.7	1,700.5	6.0	1,481.4	5.3	1,524.2	5.3
Indonesia		**28,594.7**	**100**	**28,553.9**	**100**	**27,727.8**	**100**	**28,513.6**	**100**

Source: Statistics - Indonesia, 2015

In eradicating poverty, we also have to consider the severity. Poverty Severity Index is the average expenditure gap of every poor inhabitant to the poverty line. The larger the index value, the farther the average expenditure of the poor from the poverty line is. National poverty gap index in 2015 amounted to 1.84. Poverty Severity Index gives an overview of the spread of expenditure among the poor. The higher the index value, the higher the expenditure inequality among the poor is. National poverty severity index in 2015 amounted to 0.51. Details about poverty gap index and poverty severity index by province can be seen in Annex 1.11.

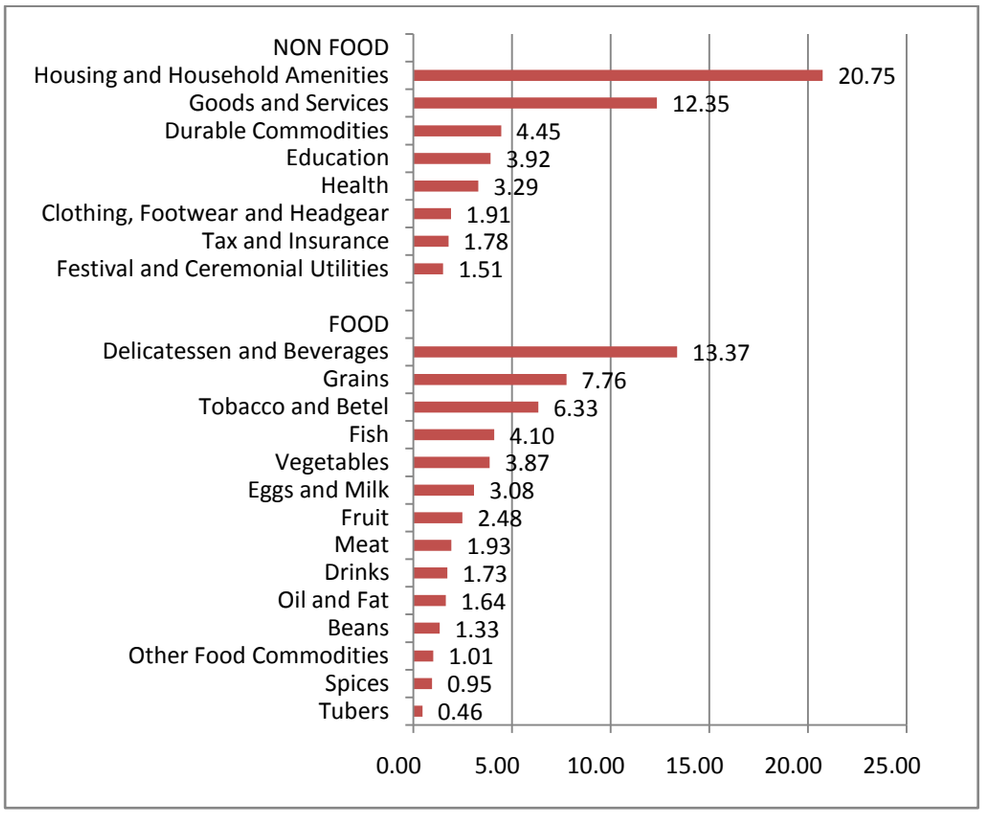
To describe the income inequality, we use the Gini Coefficient/Gini Index (Gini Ratio). The Gini Index is a coefficient that indicates the degree of inequality or equality of income distribution as a whole. Gini Index value is between 0 and 1. The higher the Gini Index, the higher the income inequality is. If the value of the Gini index is 0, it means there is a complete equality in the distribution of income; whereas if the value is 1, it means there is complete inequality in the distribution of income. For years, Indonesia has a constant Gini index that is equal to 0.41. Details about the Gini Index in can be seen in Annex 1.12.

Income received by a household can describe the level of welfare of the family. However, accurate information about household income is difficult to obtain, therefore the household expenditure data approach is used. Household expenditure data is divided between food and non-food. The two groups can describe how households allocate their needs. According to the laws of economics (Ernst Engel, 1857), regardless of personal tastes

on food, the proportion of income spent on food falls as income rises. Hence, in general, the better the income (welfare), the lower the percentage of expenditures on food is.

In Figure 1.9, based on the results of National Socio-Economic Survey (*Susenas* or *Survei Sosial Ekonomi Nasional*) in March 2014, the average percentage of monthly expenditure per capita on food (50.04%) is still higher than the expenditure on non-food (49.96%). The three highest expenditures are on housing and household facilities (20.75%), on delicatessen and beverages (13.37%) and on goods and services (12.35%). Health expenditure, on the other hand, only amounted to 3.29% of the total monthly expenditure. The average percentage of expenditure on health is still low compared to that on tobacco and betel, which amounted to 6.33%.

FIGURE 1.9
PERCENTAGE OF AVERAGE MONTHLY EXPENDITURE PER CAPITA, 2014



Source: Statistics - Indonesia, 2015

Economic growth is closely related to job opportunities in Indonesia. Population in terms of employment is the supply of the labor market, but only the working-age population (aged 15 and over) can offer their service in the job market. The working age population is divided into two groups: the labor force and the non-labor force. The group of labor force is composed of the working population (actively employed or have a job but temporarily absent from work) and the unemployed (people who are looking for work, who are preparing their own business, who already have a job but have not started work, who find it impossible to get

a job/feel hopeless).The group of non-labor force, on the other hand, comprises people who are at school, who take care of the house, and others.

Table 1.3 shows labor conditions in Indonesia in 2012-2015. In the period from August 2012 until August 2015 there was an increase in the number of labor force; the working population and the number of open unemployment. Total labor force in Indonesia in August 2012 amounted to 119.84 million people, increasing to 122.38 million by August 2015. However, there was a decline in Labor Force Participation Rate (LFPR); from 67.76% in August 2012 to 65.76% in August 2015. LFPR is the percentage of the labor force to the working age population. This indicator shows the working age population that is economically active in a region and shows the relative size of the labor supply available for the production of goods and services in an economy.

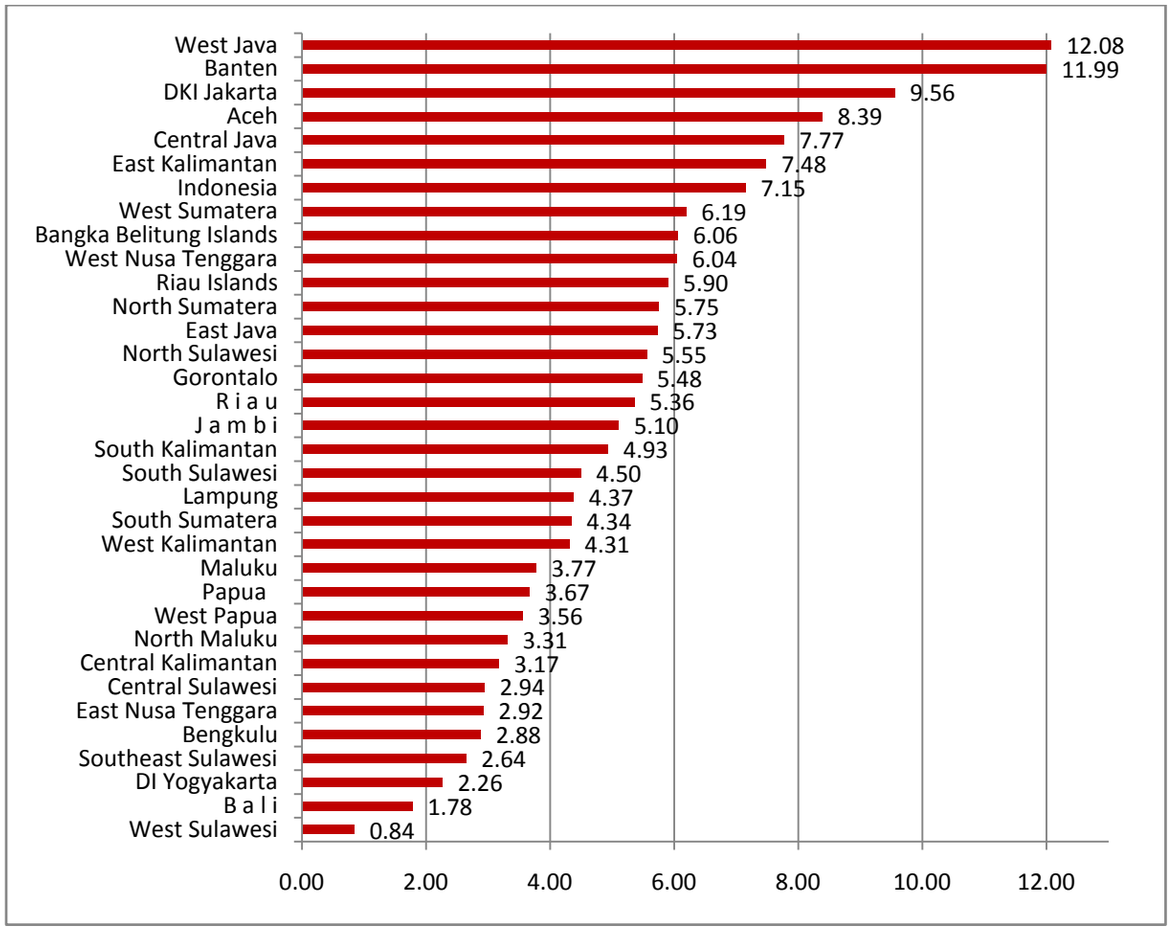
TABLE 1.3
POPULATION OF AGE 15 AND OVER BY MAIN ACTIVITIES,2012-2015

Labor Force	2012		2013		2014		2015	
	Feb	Aug	Feb	Aug	Feb	Aug	Feb	Aug
Number of Labor Force (in Millions)	121,82	119,84	123,17	120,17	125,32	121,87	128,30	122,38
Labor Force Participation Rate (%)	69,59	67,76	69,15	66,77	69,17	66,60	69,50	65,76
Number of Working Population (in Millions)	114,06	112,50	115,93	112,76	118,17	114,63	120,85	114,82
Number of Open Unemployment (in Millions)	7,76	7,34	7,25	7,41	7,15	7,24	7,45	7,56
Open Unemployment Rate (%)	6,37	6,13	5,88	6,17	5,70	5,94	5,81	6,18

Source: Statistics - Indonesia, 2016

Total of open unemployment in Indonesia in 2012-2015 increased from 7.34 million in August 2012 to 7.56 in August 2015. Thus, the Open Unemployment Rate (OUR) increased from 6.13% in August 2012 to 6.18% in August 2015. OUR describes the proportion of the labor force who are unemployed and actively looking for a job and willing to work, or the ratio of job seekers in the labor force.

FIGURE 1.10
OPEN UNEMPLOYMENT RATE (OUR),2015



Source: Statistics - Indonesia, 2016

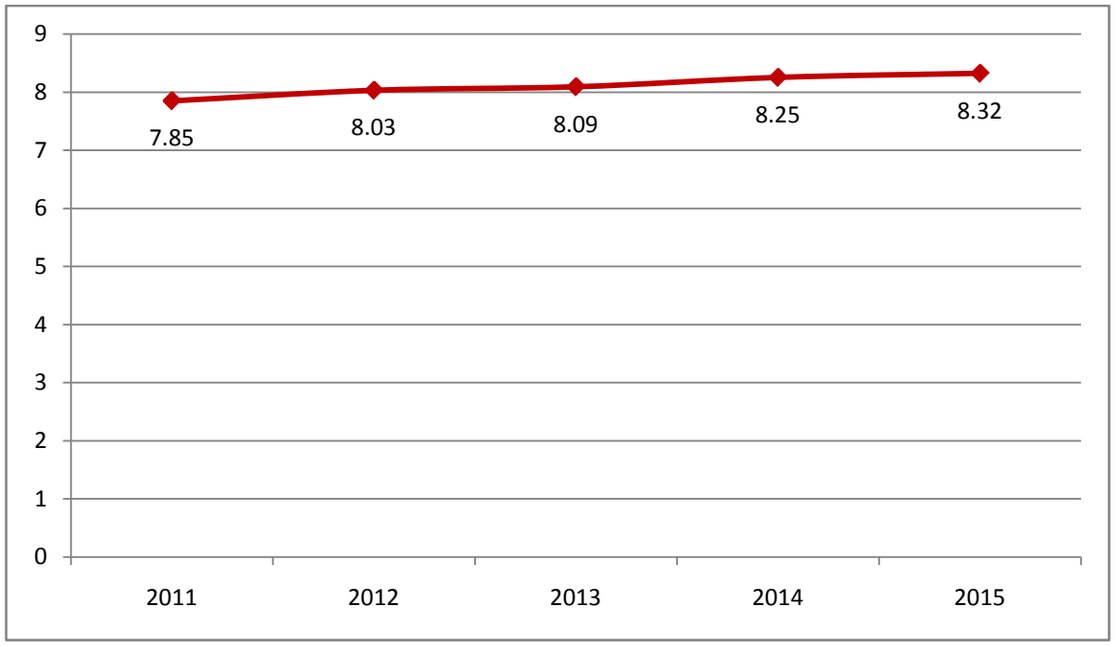
From the figure above we can see that the highest Open Unemployment Rate (OUR) by province in 2015 belongs to West Java (12.08%), Banten (11.99%) and DKI Jakarta (9.56%), and the lowest belongs to West Sulawesi (0.84%), Bali (1.78%) and Yogyakarta (2.26%). High Open Unemployment Rate is usually in line with population growth especially when it is not supported by the availability of employment, or when the population is reluctant to create jobs for themselves (at least), or the situation does not allow them either to get a job or to create jobs.

C. EDUCATION

One of the components of considerable influence in measuring the level of human development of a country is the educational component. Constant improvement in public attitudes is promoted by the increasing level of education. Education is also anabsolute condition in the achievement of human development goals, and is the development target as well as the means of national development. Public education can be measured by various

indicators, one of which is a sensitive indicator which can measure levels of public education, namely the average length of study.

FIGURE 1.11
AVERAGE LENGTH OF STUDY OF POPULATION AGED 15 AND OVER (IN YEARS)
2012 - 2015

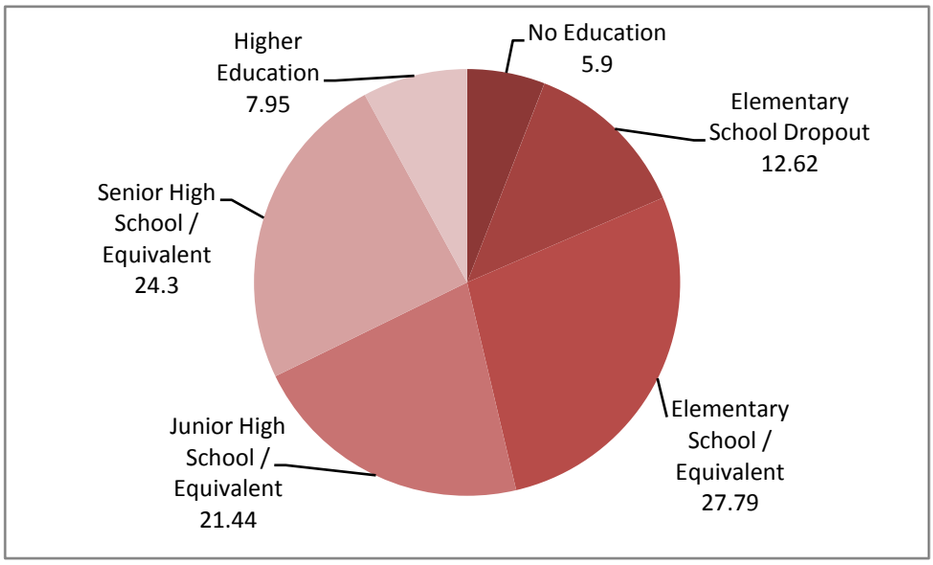


Source: Statistics - Indonesia, 2016

There has been an upward trend in the average length of study of the population aged 15 and over, from 7.85 years in 2011 to 8.32 years in 2015. However, this rate does not meet the goal of nine years of compulsory education. In 2015, we can see a higher average length of study in urban areas (9.61 years) than in rural areas (6.98 years). It is associated with the presence of more school facilities in urban areas than in rural. By gender, men tend to stay longer in school (8.69 years) than women (7.96 years). A total of nine provinces have achieved the 9-year compulsory education program, namely DKI Jakarta, Riau Islands, DI Yogyakarta, Maluku, East Kalimantan, West Papua, North Sumatera, Aceh, and North Sulawesi. The lowest average length of study belongs to the province of Papua by 6.27 years and the highest to DKI Jakarta by 10.90 years. Details of the average length of study of the population aged 15 and over by province and sex can be seen in Annex 1.16.

One of the achievements in education is the ownership of a diploma or Certificate of Graduation (*STTB* or *Surat Tanda Tamat Belajar*), which is a requirement to either continue their education to higher levels or search for suitable jobs. Additionally, a diploma or an *STTB* usually is also a benchmark in the society or social relationships. Regarding the quality of life, there is a tendency for people with higher diplomas to be in possession of better knowledge, resulting in improved quality of life, especially in the areas of health and housing.

FIGURE 1.12
PERCENTAGE OF POPULATION AGED 15 AND OVER
BY HIGHEST EDUCATION LEVEL, 2015



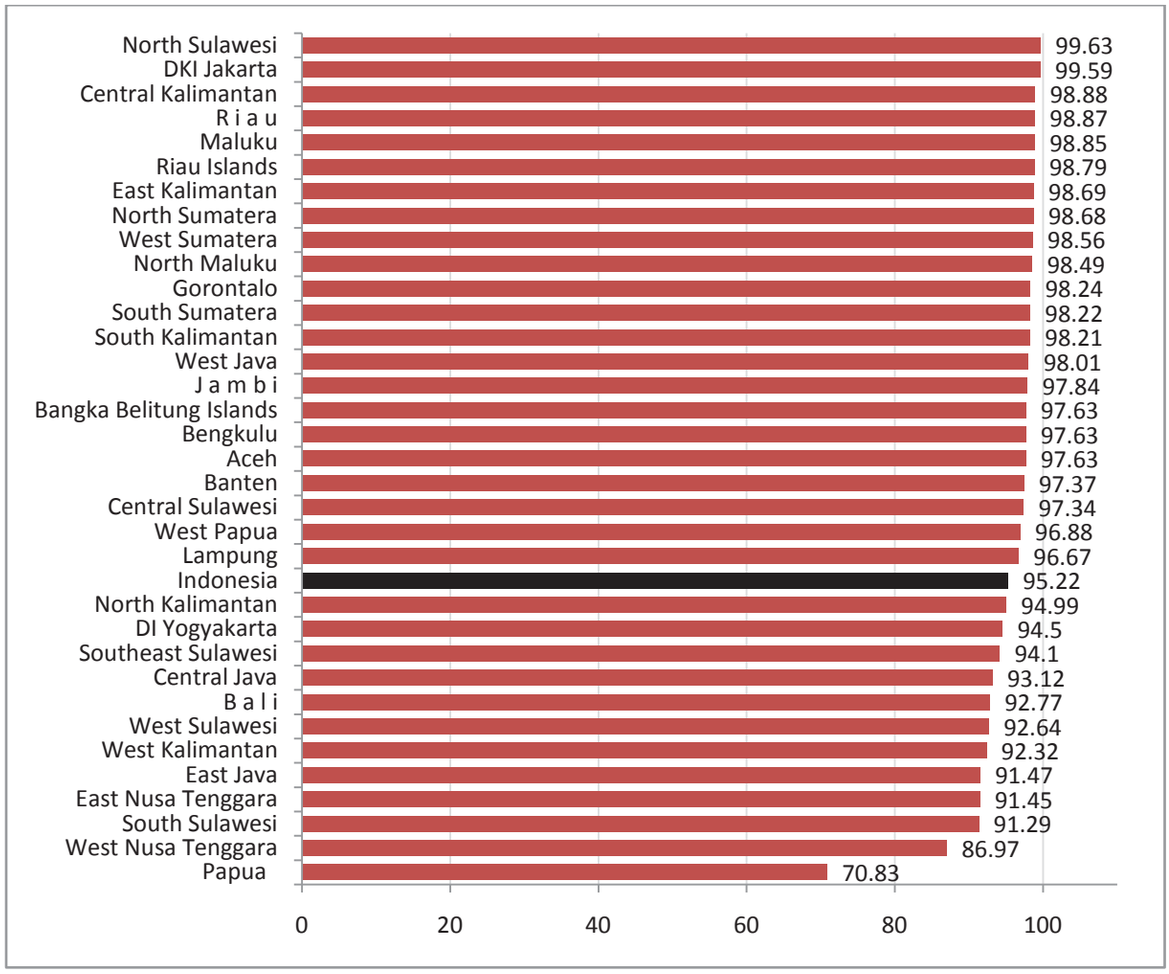
Source: Statistics - Indonesia, 2016

In 2015, the percentage of population aged 15 and over by highest education level attained is as follows: certificate/*STTB* of Elementary School/equivalent amounted to 27.79%, certificate/*STTB* of Senior High School/equivalent amounted to 24.3%, and certificate/STTB of Junior High School/equivalent amounted to 21.44%.

What the population fundamentally needs for a more prosperous life is the ability to read and write. People who can read and write in general have access to far greater things than people who cannot, so the opportunity of living a better life is owned by those with the skills. The ability to read and write is reflected in the Literacy Rate and Illiteracy Rate.

Illiteracy Rate is the basis of the implementation of literacy programs, and the numbers are expected to continue to decline. During 2011-2015 Illiteracy Rate declined from 7.56% in 2011 to 4.78% in 2015. Literacy Rate is the opposite of Illiteracy Rate. Literacy Rate is the percentage of population aged 15 and over who can read and write and understand a simple sentence in their daily lives. Literacy Rate indicates the population's ability to absorb information from various media and shows the ability to communicate orally and in writing. The improving Literacy Rate is expected to reduce the level of poverty so that the level of welfare is expected to increase.

FIGURE 1.13
LITERACY RATE (IN PERCENTAGE) BY PROVINCE, 2015



Source: Statistics - Indonesia, 2016

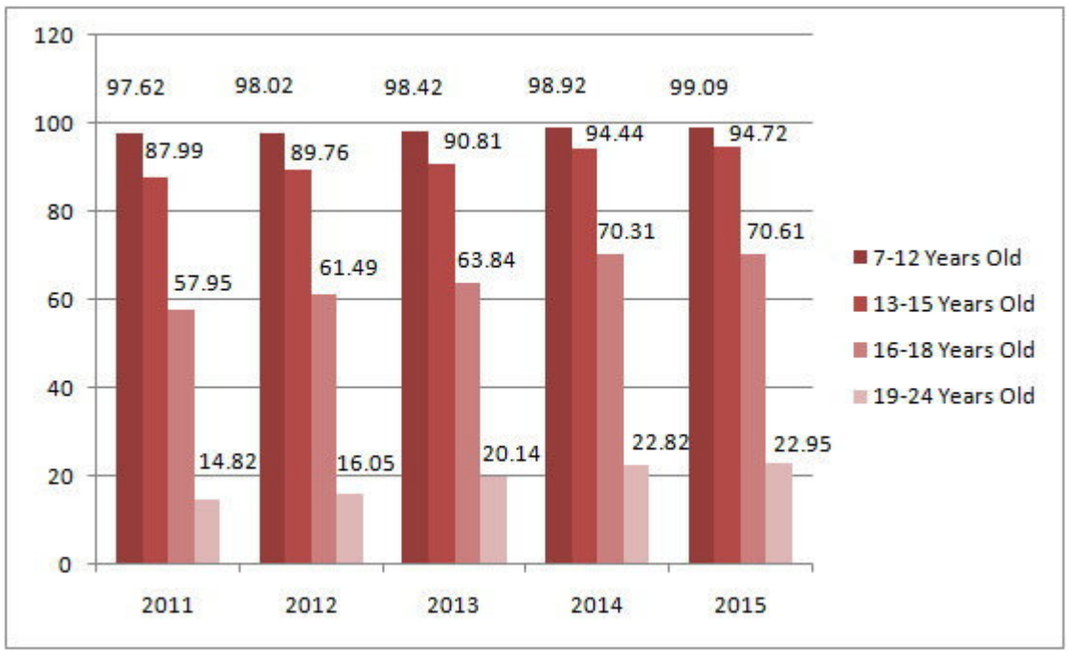
In Figure 1.13, National Literacy Rate in 2015 amounted to 95.22%. The province of North Sulawesi has the highest Literacy Rate (99.63%) and the lowest belongs to the province of Papua (70.83%). Generally in 34 provinces, the Literacy Rate for men is higher than women's. The disparity in Literacy Rate between men and women ranged from 0.13% to 10.2%, the lowest in the province of North Sulawesi and the highest in the province of West Kalimantan. Details of Literacy Rate (percentage of population aged 15 and over who are literate) by province and sex can be seen in Annex 1.18.

Enrollment rate is an education indicator that measures the level of school enrollment of a population by age group or level of education. There are three types of indicators that provide a picture of the school enrollment, namely School Enrollment Ratio (*APS* or *Angka Partisipasi Sekolah*), Gross Enrollment Ratio (*APK* or *Angka Partisipasi Kasar*) and Net Enrollment Ratio (*APM* or *Angka Partisipasi Murni*).

APS is a percentage of the number of pupils of a certain school age who attend school at all levels of education divided by the population of relevant school age. This indicator is

used to determine the number of school-age children who are still in school at all levels of education. *APS* is generally categorized into four age groups, namely 7-12 years of age representing the primary level, 13-15 years of age representing the junior high school/*MTs* level, 16-18 years of age representing the senior high school/vocational school, and 19-24 years of age representing the college level. The higher the *APS*, the more school-age children are enrolled in school.

FIGURE 1.14
SCHOOL ENROLLMENT RATIO, 2011 – 2015



Source: Statistics - Indonesia, 2016

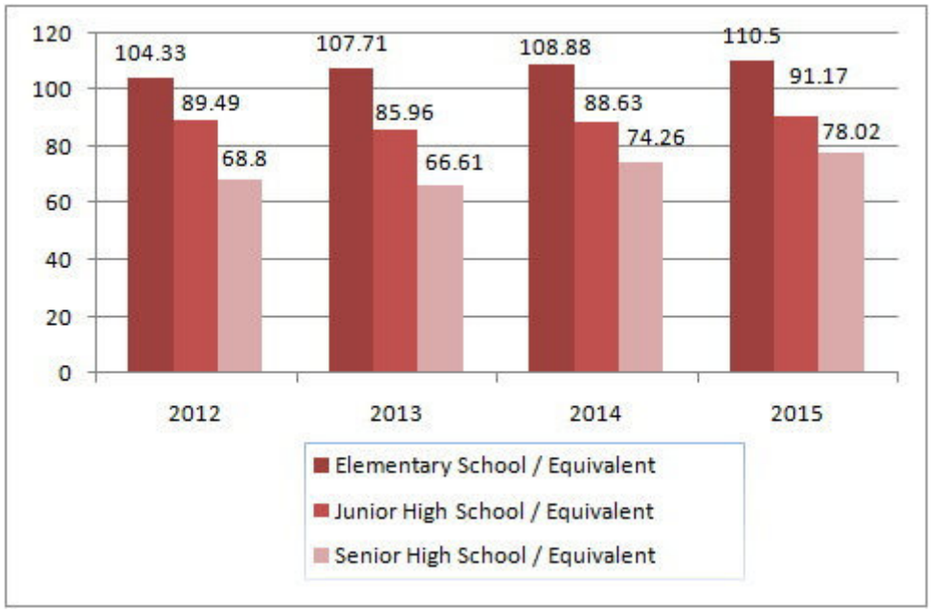
Figure 1.14 shows the *APS* in 2011 to 2015 for each school-age group tends to increase. The higher the age group,the smaller the school enrollment ratio gets. This might be due to the fact thatthe age group of 16-18 and 19-24 years of age have entered the labor force and started working. The largest increase occurred in the age group of 16-18 years of age or age group of the senior high school/equivalent. This is in line with the 12-year compulsory education program. Improved APS also occurred in the age group of 7-12 years and 13-15 years of age. This is in line with the 9-year compulsory education program, the launch of which preceded the 12-year compulsory program. Details of *APS* by province and age group in 2012-2015 can be seen in Appendix 1.19, while the details of *APS* by province, sex, and age group in 2015 can be seen in Annex 1.20.

Gross Enrollment Ratio or *APK* is an indicator that can provide a description of the school enrollment of a population at a certain level of education regardless of age. *APK* is the ratio of the number of students, regardless of age, who are studying in a certain level of education to the population of the age group that is associated with that level of education, expressed as a percentage. *APK* shows the level of general participation of the population in

a certain level of education. The results are used to determine the number of children attending a certain level of education in a region. The higher the *APK* in a region, the more school-age children are attending a certain level of education.

In Figure 1.15 we can see that the *APK* for Elementary School/equivalent in 2012-2015 exceeded the 100 percent, which indicates a number of students who enroll too early (below 7 years old who already start school) or too late (over 12 years old who haven't finished Elementary School/equivalent). From 2012 to 2015, *APK* increased at all levels of education. In 2015 the value of the *APK* of Elementary School/equivalent amounted to 110.5%, of Junior High School/equivalent amounted to 91.17%, of Senior High School/equivalent amounted to 78.02%. Details of *APK* by province in 2012-2015 can be seen in Annex 1.21. In general, *APK* of female population is higher than that of male at all levels of education, except Elementary School/equivalent. This shows there are more femalescontinuing their education to a higher level than males. Details of *APK* by province and sex in 2015 can be seen in Annex 1.22.

FIGURE 1.15
GROSS ENROLLMENT RATIO, 2012 - 2015



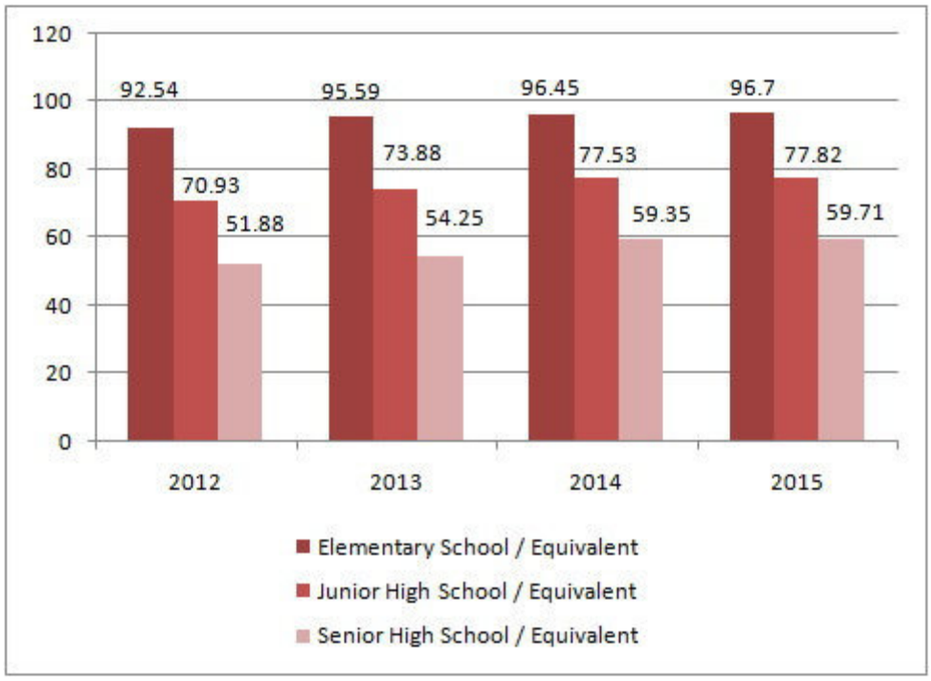
Source: Statistics - Indonesia, 2016

The last education indicator is Net Enrollment Ratio or *APM* (*Angka Partisipasi Murni*). *APM* is the ratio between the number of school-age groups of students at a particular level of education with the population of that school-age, expressed as a percentage. In contrast to the *APK*, *APM* uses restrictions on age groups. This indicator is used to determine the number of school-age children who attend school in an education appropriate to his age. The higher the *APM* in a region, the more school-age children are attending school there. When compared to *APK*, *APM* is a better indicator of education because it also takes into account

the participation of the population of the standard school-age for particular levels of education.

In Figure 1.16, the *APM* in 2015 for Elementary School/equivalent amounted to 96.7%, Junior High School/equivalent amounted to 77.82% and Senior High School/equivalent amounted to 59.71%. This condition continues to increase at all levels of education compared with previous years. The *APM* better reflects the enrollment compared with *APK*. Details of *APM* by province in 2012-2015 can be seen in Annex 1.23.

FIGURE 1.16
NET ENROLLMENT RATIO, 2012 - 2015



Source: Statistics - Indonesia, 2016

D. HUMAN DEVELOPMENT INDEX

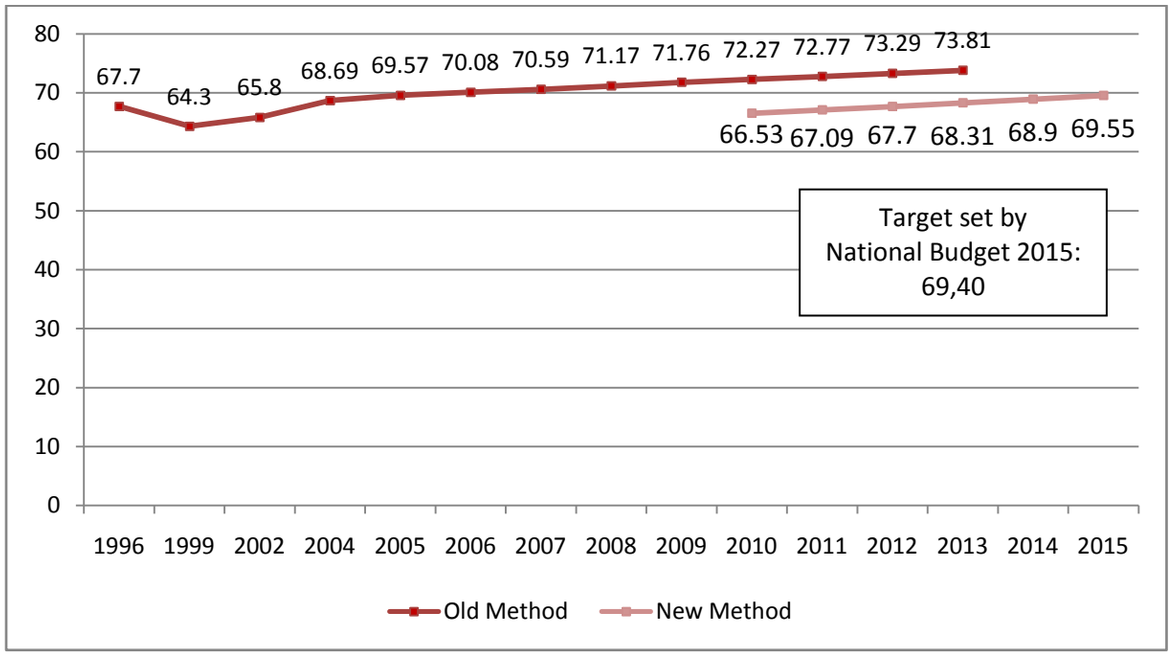
According to the United Nations Development Programme (UNDP), Human Development Index (HDI) measures human development achievements based on a number of basic components of quality life. HDI is developed through three basic dimensions approach, as a measure of quality of life, namely a long and healthy life, access to knowledge and a decent standard of living.

To measure the dimension of a long and healthy life (health dimension) we use Life Expectancy at Birth. To measure the dimension of access to knowledge we use combined indicators of Literacy Rate and Mean Years of Schooling. As for the dimension of a decent standard of living, we use Purchasing Power Parity of the community on a number of basic needs as seen from the average amount of expenditures per capita (GDP).

In 2014, the HDI methodology changed. Literacy Rate in the old methods was replaced with Expected Years of Schooling. Gross Domestic Product (GDP) per capita was replaced by Gross National Product (GNP) per capita. Arithmetic mean in the aggregation method was replaced with geometric mean.

Indonesian human development continues to increase from year to year, as measured by either the old method (1996-2013) orthe new method (2010-2015). With the new method over the period of 2010-2015, Indonesia's HDI value increased by 3.02 points, from 66.53 in 2010 to 69.55 in 2015. When viewed by the National Budget, based on the HDI target set at 69.40, Indonesia exceeded the target (2015 HDI = 69.55). High acceleration is thought to be one cause of the achievement. In 2015, Indonesia's HDI grew 0.94% or had an increase of 0.65 points compared with 2014 HDI. The growth was higher than that in the previous year, which was only 0.87%, and was the highest during 2010-2015.

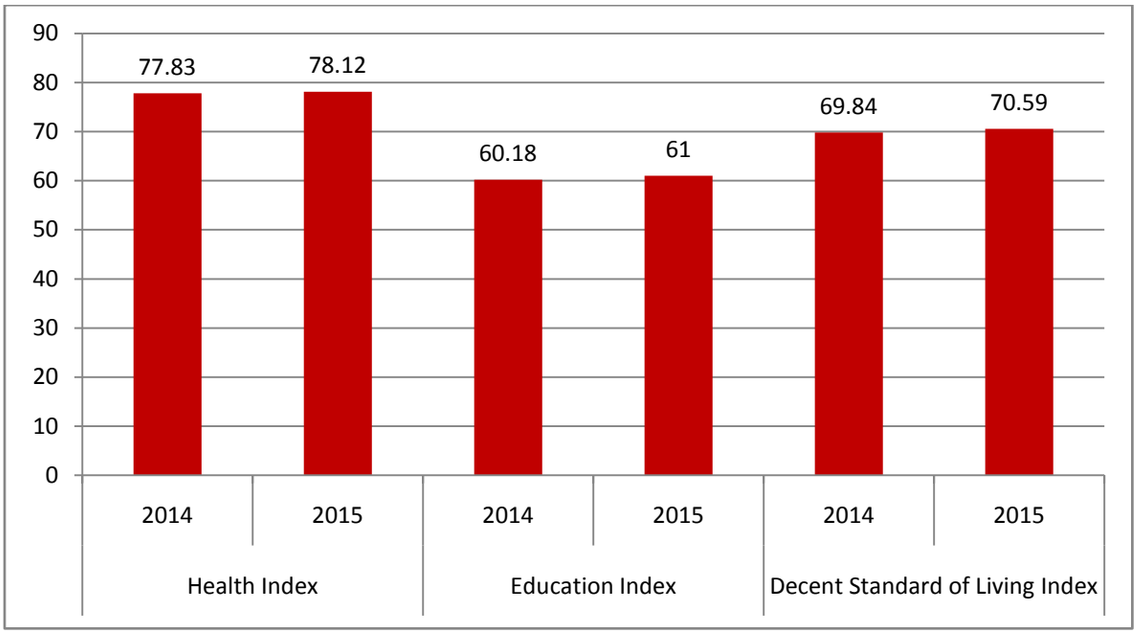
FIGURE 1.17
HUMAN DEVELOPMENT INDEX, 1996 – 2015



Source: Statistics - Indonesia, 2015

The high HDI in 2015 was driven by an increase in all constituent components. Education Index is a component of the HDI experiencing the highest acceleration. In 2015, the Education Index reached 61, an increase of 0.82 points from the previous year. Likewise with a Decent Standard of Living index,an increase of 0.75 points. Health Index, represented by Life Expectancy at Birth, also had an increase although it was not too significant.

FIGURE 1.18
COMPONENTS OF HUMAN DEVELOPMENT INDEX, 2014 – 2015



Source: Statistics - Indonesia, 2015

In the period 2014-2015, there were three provinces with the most rapid progress with human development, namely West Nusa Tenggara (1.37%), East Java(1.19%) and West Sulawesi (1.16%). In contrast, there were three provinces in the same period with the slowest progress with human development, namely North Kalimantan (0.17%), Maluku (0.46%) and East Kalimantan (0.47%).

To see the achievement of HDI among regions, we can see through HDI value categories, namely:

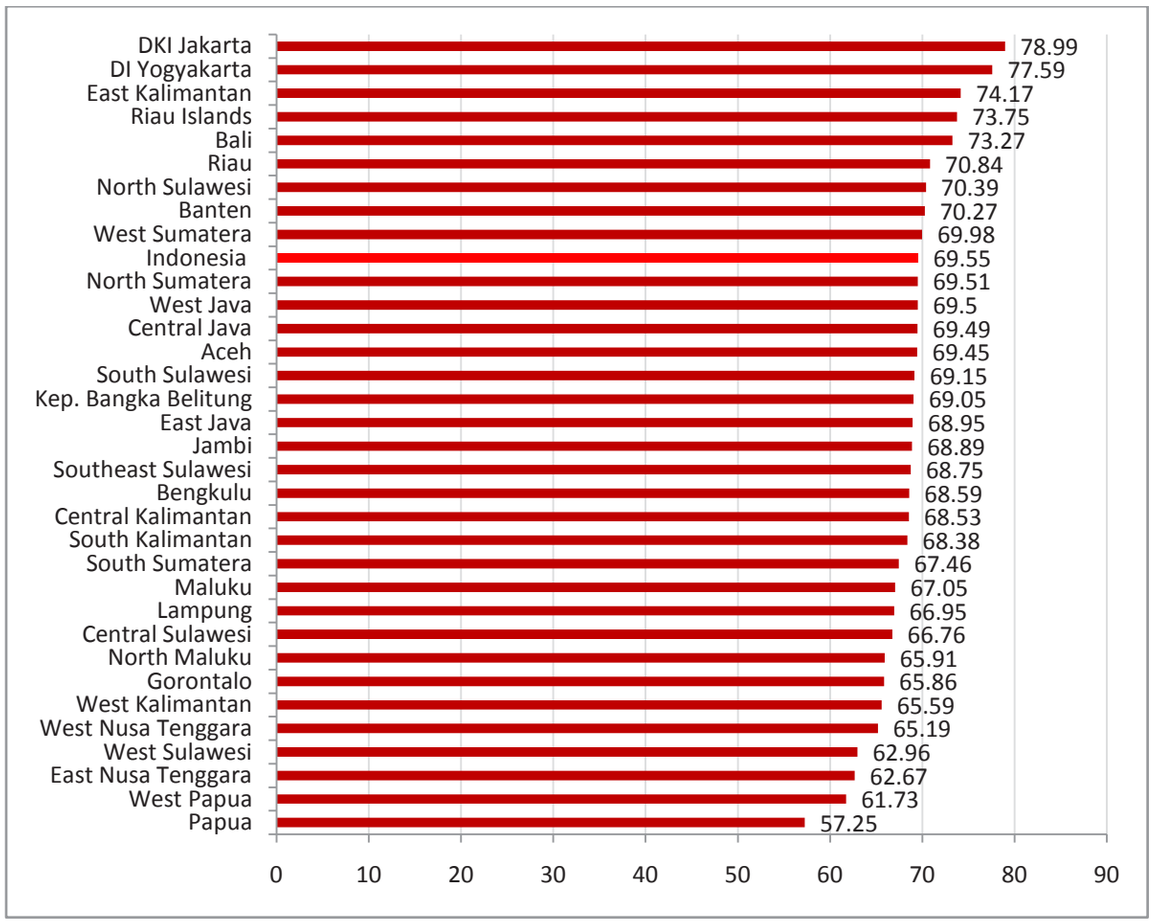
- HDI < 60 : low HDI
- 60 ≤HDI< 70 : middle HDI
- 70 ≤HDI<80 : high HDI
- ≥ 80 : very high HDI

Figure 1.19 shows the values of the HDI by province in 2015. Based on the categorization, there were no provinces in Indonesia with very high HDI category. There were 8 provinces (23.53%) that were in the category of high HDI and 25 provinces (73.53%) in medium HDI. From 2014 to 2015, there was still one province in Indonesia in the category of low HDI, namely Papua. The regional autonomy is expected to improve the progress of development, especially in order to improve the quality of human life.

The highest HDI belonged to the province of DKI Jakarta. Since it was first measured until year 2013, the HDI achievement of DKI Jakarta has always been the highest among other provinces. The availability of health and education facilities, good economy as well as easy access to all those facilities make the province of DKI Jakarta superior to other regions

in Indonesia. This condition is one of the factors driving the high human development achievements in DKI Jakarta.

FIGURE 1.19
HUMAN DEVELOPMENT INDEX BY PROVINCE, 2015



Source: Statistics - Indonesia, 2015

CHAPTER II
HEALTH FACILITY

Chapter II
HEALTH FACILITY

Public health status of a country is influenced by the existence of health facilities, among others. Law Number 36 Year 2009 on Health states that healthcare facilities are instruments and/or premises used to organize healthcare efforts, either promotive, preventive, curative, or rehabilitative conducted by the government, local government, and/or community.

Health facilities reviewed in this section include healthcare facilities, pharmaceutical facilities and medical devices, and state health educational institutes that produce health professionals. Healthcare facilities discussed in this section include health centers and hospitals.

A. HEALTH CENTER

Regulation of the Minister of Health Number 75 Year 2014 regarding Health Centers states that Health Center is a healthcare facility that organizes both public and individual health efforts in the primary level, with more emphasis on promotive and preventive efforts, to achieve the optimal public health status in its working area.

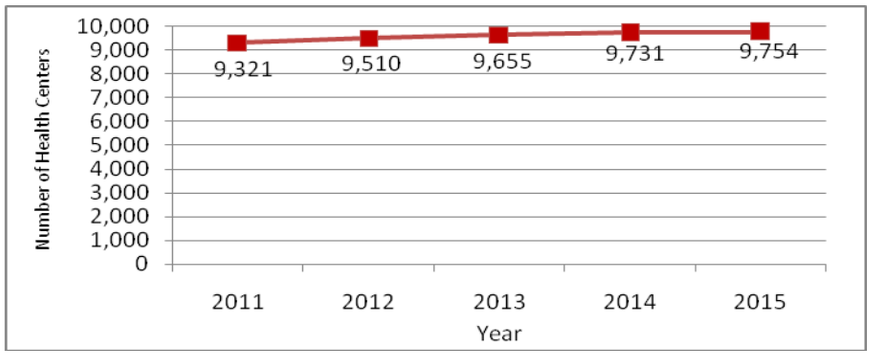
Health centers have the task of implementing health policies to achieve the objectives of health development in the working area in order to support the realization of the Healthy Sub-District program. In addition to carrying out the task, health centers serve as an organizer of Public Health Efforts (*UKM* or *Upaya Kesehatan Masyarakat*) in the primary level and Individual Health Efforts (*UKP* or *Upaya Kesehatan Perseorangan*) in the primary level, as well as educational facilities for health professionals.

Public health efforts can be defined as all activities to maintain and improve health as well as to prevent and overcome health problems with families, groups, and communities as targets. Individual health efforts can be defined as activities and/or a set of health service

activities aimed to improve health, to prevent and cure diseases, to reduce suffering from illnesses and to restore the health of individuals.

Until December 2015, there were 9,754 health centers, comprising 3,396 health centers with inpatient care and 6,358 health centers without inpatient care. This number increased compared to that of 2014 with 9,731 health centers, comprising 3,378 units with inpatient care and 6,353 units without inpatient care. Within the last 5 years, there has been an increase in the number of health centers that can be seen in the figure below.

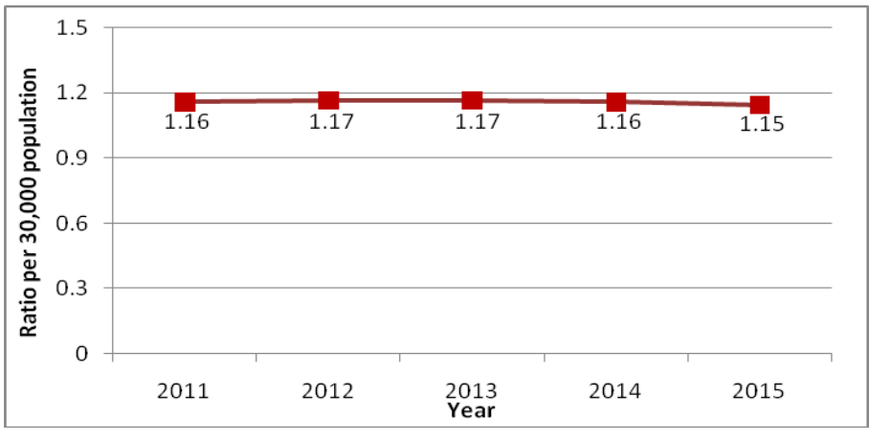
FIGURE 2.1
NUMBER OF HEALTH CENTERS, 2011 – 2015



Source: Center for Data and Information, Ministry of Health RI, 2016

Since 2011 the number of health centers has been increasing, from 9,321 units to 9,754 units in 2015. Nevertheless, the increase in the number of health centers does not directly reflect the fulfillment of primary healthcare in the region. The fulfillment of the needs of primary healthcare can be viewed in general from the ratio of health centers to 30,000 population. The ratio of health centers for 30,000 population tended to increase in the period of 2011-2013, but it decreased in 2014 by 1.16 and in 2015 by 1.15. This is due to the fact that the rate of the number of health centers is lower than the rate of population growth.

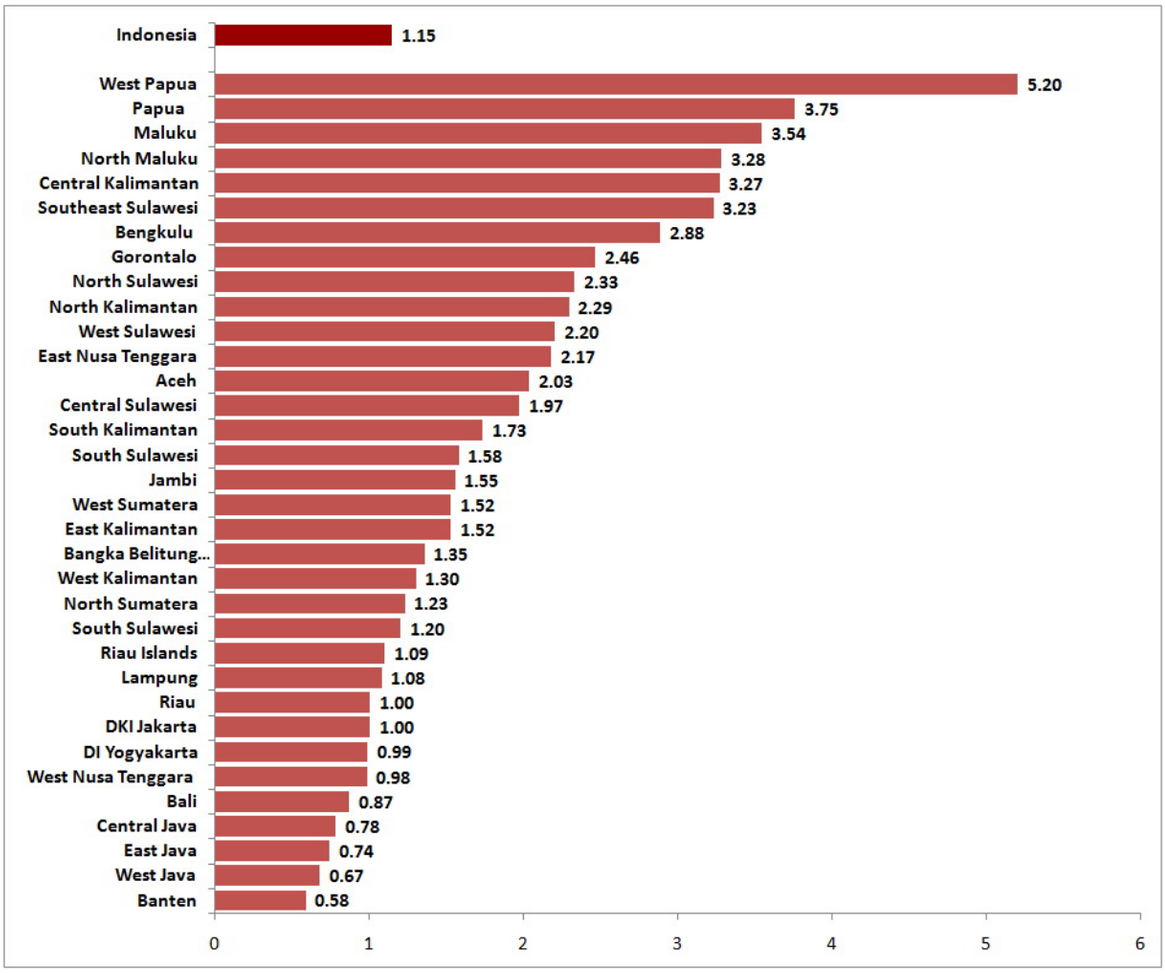
FIGURE 2.2
RATIO OF HEALTH CENTERS PER 30,000 POPULATION IN 2011-2015



Source: Center for Data and Information, Ministry of Health RI, 2016

The province with the highest ratio of health centers is West Papua, with 5.20 per 30,000 population, whereas Banten has the lowest ratio with 0.58 per 30,000 population. The ratio of health centers per 30,000 population does not fully reflect the actual condition of the community access to primary healthcare. For example, the three provinces with the highest ratio are located in the eastern region, namely West Papua, Maluku and Papua. This may be due to the relatively small number of inhabitants compared to the extensive area coverage.

FIGURE 2.3
RATIO OF HEALTH CENTERS PER 30,000 POPULATION
2011-2015



Source: Center for Data and Information, Ministry of Health RI, 2016

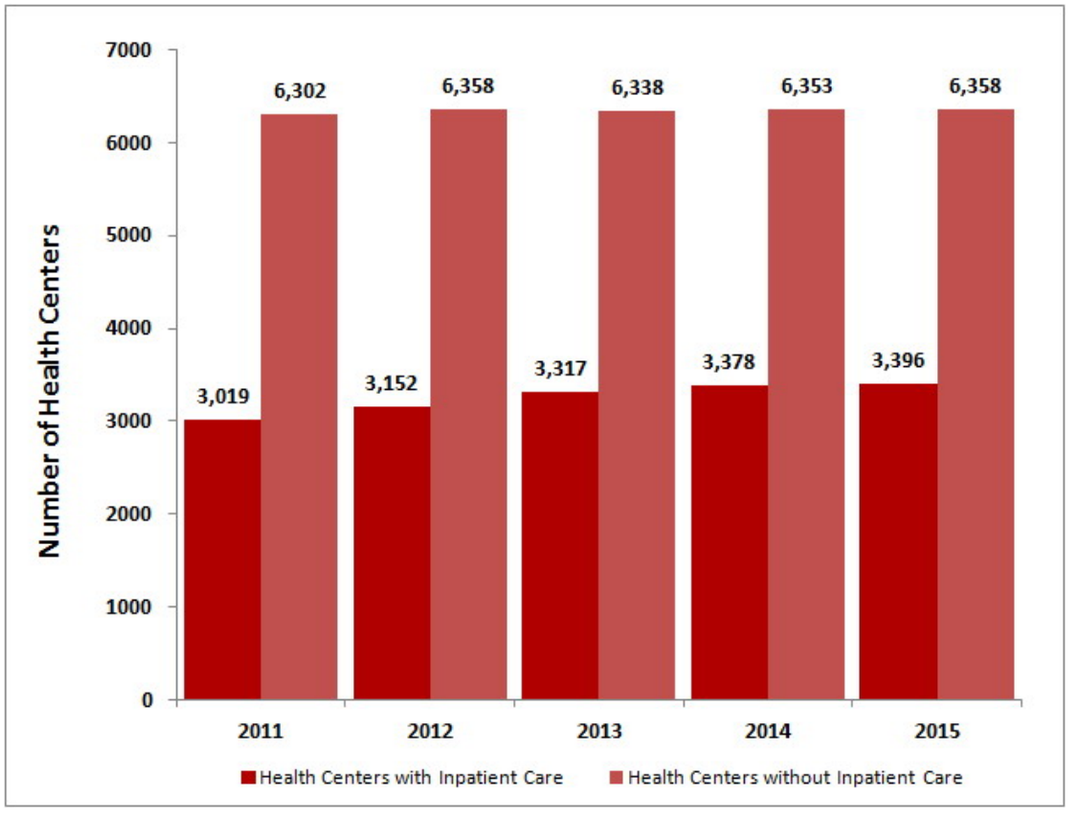
In addition to Banten, the provinces of West Java, East Java and Central Java also have low ratios, each amounting to 0.54, 0.67 and 0.74 per 30,000 population. Beside those three provinces, other provinces in Java Island also have low ratios of health centers. This is due to the high population density. The health service in Java is supported not only by the government but also by the private sector, so that the provision of health services is not only derived from primary healthcare. However, this condition should not be ignored; although the

primary healthcare needs can be met by the private sector, an area still requires an entity to be responsible for public health efforts.

In carrying out its function as providers of primary healthcare, a health center executes the Individual Health Efforts (*UKP*) and Public Health Efforts (*UKM*) programs. Individual health efforts performed consists of outpatient care and also inpatient care for certain health centers if deemed necessary. Although public health is the main function of the health center, individual healthcare is also a concern of the government. For those areas classified under Underdeveloped, Borders, and Islands Regions (*DTPK* or *Daerah Tertinggal, Perbatasan, Kepulauan*), Special Allocation Fund (*DAK* or *Dana Alokasi Khusus*) is disbursed to health offices of the district/municipality to build subsidiary health centers (*Pustu* or *Puskesmas Pembantu*) and health centers, as well as to upgrade them to health centers with inpatient care. For areas outside above the *DTPK* category, the *DAK* can be used to rehabilitate health centers/official residences, and to improve the performance of Basic Obstetric and Neonatal Emergency Care (*PONED* or *Pelayanan Obstetri dan Neonatal Emergensi Dasar*).

Below is the growth of the number of health centers with and without inpatient care from 2011 until 2015.

FIGURE 2.4
NUMBER OF HEALTH CENTERS WITH AND WITHOUT INPATIENT CARE
2011 – 2015



Source: Center for Data and Information, Ministry of Health RI, 2016

The number of health centers with inpatient care for the past five years has continued to rise, as many as 3,019 units in 2011, then increased to 3,396 units in 2015. The number of health centers without inpatient care also increased, from 6,302 units in 2011 to 6,358 units in 2015. However, based on the annual progress, the number of health centers without inpatient care in 2013 decreased and then increased again in 2014.

In addition to providing maternal health services, child care, nutrition, health promotion and the implementation of *PONED* health center, health centers also provide services relating to a variety of other health programs, namely Adolescent Health Care (*PKPR* or *Pelayanan Kesehatan Peduli Remaja*), Occupational Health Program, Sports Health Program, and Treatment on Child Abuse Cases (*KTA* or *Kekerasan Terhadap Anak*). The healthcare is organized according to the needs in the working area. For example, Occupational Health Program is required at the health center located in within an industrial complex. A more detailed picture of the number and type of health centers by province can be found in Annex 2.1 and Annex 2.2.

1. Health Centers with Occupational Health Program

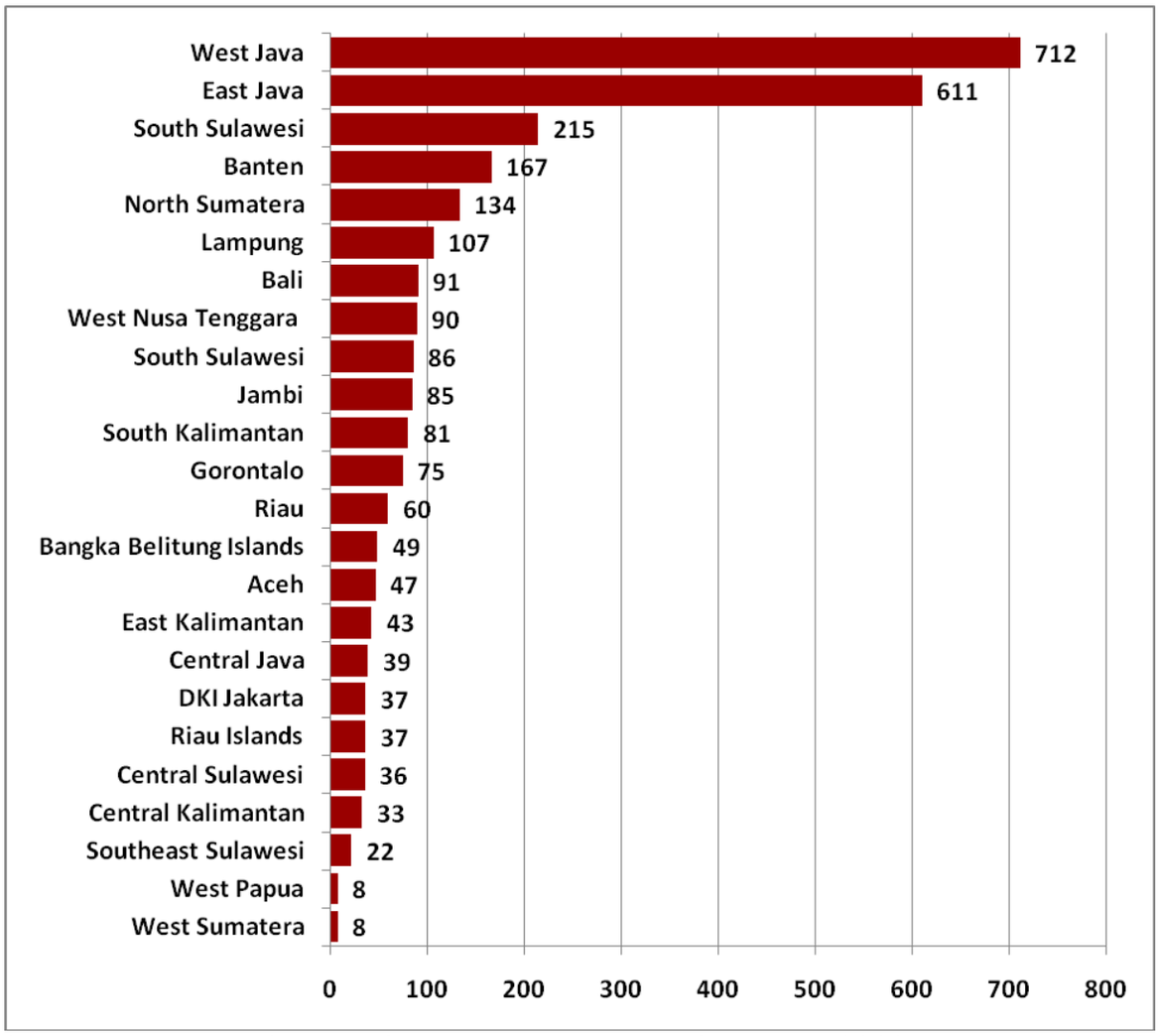
Law Number 36 Year 2009 on Health in Chapter XII of Occupational Health, Articles 164-166 state that occupational health program is aimed at protecting the workers so they can live a healthy life that is free from health problems as well as from any adverse effects to their health caused by the work. In addition, the government should provide guidance and supervision to the community and to the administrator of activities related to health resources in health and health efforts both in the formal sector (large- and medium-scale businesses) and the informal sector (independent/individual businesses, domestic industries, and micro- and small-scale businesses).

Health center has a strategic role in occupational health program for both sectors, especially in the informal sector. The health center organizes occupational health program in accordance with the circumstances and the problems that exist in the specific region of the health center. Therefore, until now, occupational health program that a health center organizes is more focused on industrial areas.

Occupational health program is implemented through activities that can strengthen occupational health services, namely:

1. Capacity building of health personnel in the field of occupational health;
2. Training on diagnosis of Occupational Diseases (*PAK* or *Penyakit Akibat Kerja*);
3. Improving healthcare facilities on the field of occupational health;
4. Initiating healthy and productive female workers movement (which includes promoting healthy reproductive organs) in the workplace as well as developing occupational health services in the informal and formal sectors, including offices;
5. Training the Candidates of Indonesian Migrant Workers (*CTKI* or *Calon Tenaga Kerja Indonesia*) with a focus on activities in the promotion of health services of Indonesian Migrant Workers (*TKI* or *Tenaga Kerja Indonesia*).

FIGURE 2.5
NUMBER OF HEALTH CENTERS PROVIDING OCCUPATIONAL HEALTH SERVICES
IN INDONESIA, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Based on the Monthly Health Report of Workers (*LBKP* or *Laporan Bulanan Kesehatan Pekerja*) released by all health centers in Indonesia, the number of health centers implementing Occupational Health and Safety (*K3* or *Kesehatan dan Keselamatan Kerja*) internally and applying either promotive, preventive, curative or rehabilitative efforts to workers in the working area in 2015 was 2,902. Provinces of West Java and East Java had the highest number of health centers that have organized basic occupational health, amounting to 712 and 611 health centers respectively.

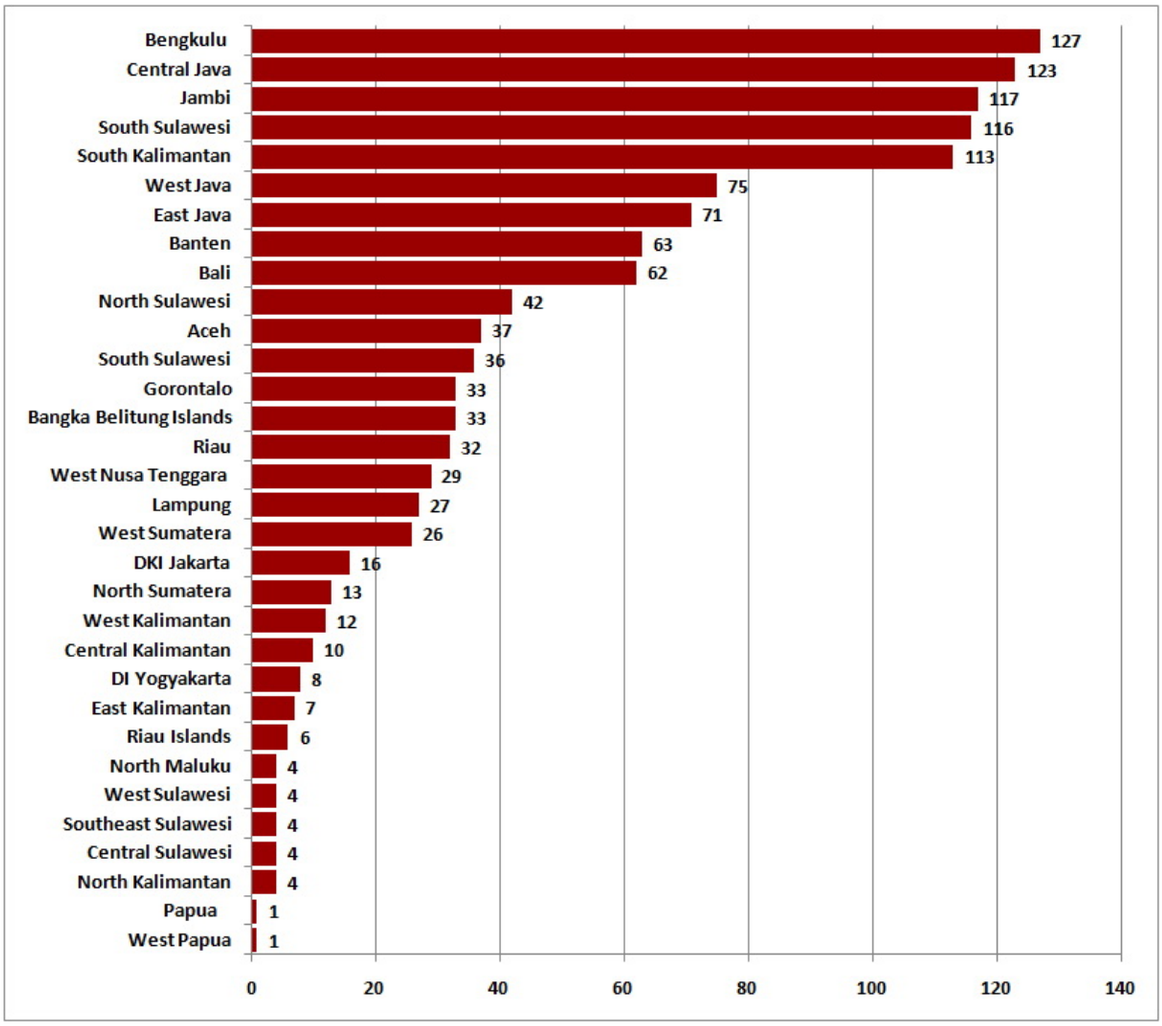
2. Health Centers with Sports Health Program

Sports health program is organized to improve public health and physical fitness. Sports health is a basic effort in promoting health to improve student achievement, job performance and sports performance through physical activities, physical exercises and

sports as stated in Law Number 36 Year 2009. Sports health program can be implemented in primary healthcare such as health centers and referral health services.

Sports health program held in health centers covers development and services of sports health. The development of sports health is in the form of data collection of groups, medical examination and health sports counseling. The development is aimed at sports groups in schools, healthy heart clubs, Posyandu for the elderly, pregnant women exercise groups, diabetic exercise groups, osteoporosis exercise groups, physical-fitness coaching groups for pilgrims, fitness centers, and other physical exercise groups. The services of sports health include sports health consultation, physical fitness level measuring, acute sports injuries management, and medical team support at sports events.

FIGURE 2.6
NUMBER OF HEALTH CENTERS PROVIDING SPORTS HEALTH SERVICES
IN INDONESIA, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Figure 2.6 shows that in 2015, the Province of Bengkulu has the highest number of health centers conducting sports health activities for community groups in their areas, amounting to 127 health centers. Meanwhile, Papua and West Papua has the lowest number, each only 1 health center. Based on the Strategic Plan of the Ministry of Health of Year 2015-2019, it is expected that in 2015 there will be 20% of health centers conducting sports health activities for community groups in their working areas. However, in 2015 based on Monthly Sports Health Report (*LBKO* or *Laporan Bulanan Kesehatan Olahraga*) released by all health centers in Indonesia there were 1,262 health centers or as much as 12.9% of all health centers that had carried out sports activities, so the target of the Strategic Plan was not achieved.

3. Traditional, Alternative, and Complementary Health Services

The government responded to the needs of the community for traditional health services by improving the institutional structures in charge of traditional health services through the Regulation of the Minister of Health Number 1144/Per/Menkes/2010, namely the Directorate of Traditional and Complementary Health Service, under the auspices of the Directorate General of Nutrition and Maternal and Child Health Care.

Traditional healthcare plays a role in the cycle of life from the womb to old age period (continuum of care), provided by the method of either skills or potions. Government Regulation Number 103 Year 2014 on Traditional Health Services states that traditional health services are divided into empirical traditional health services, complementary traditional health services and integrated traditional health services.

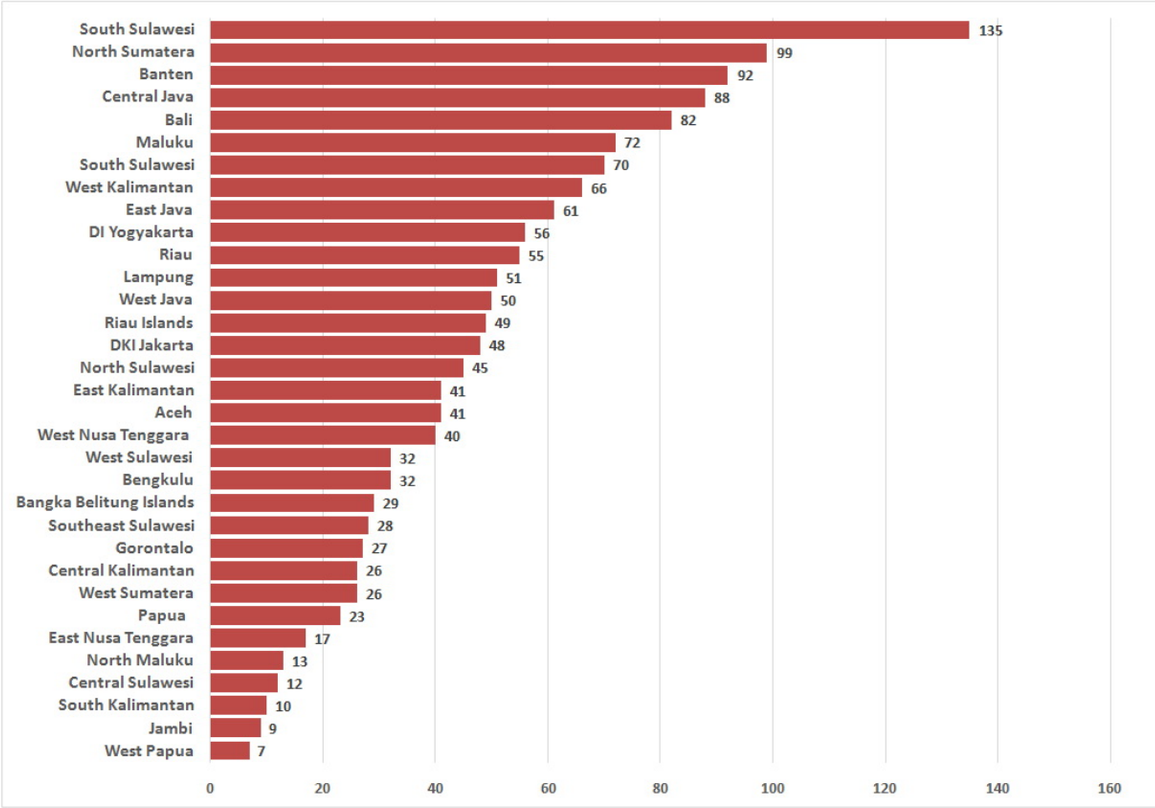
Along with the change in government policy, Directorate of Traditional, Alternative and Complementary Health Service set the target for the Strategic Plan of the Ministry of Health of Year 2015-2019, that in 2015 it is expected that 15% of health centers had organized traditional health services. Health centers are deemed to have organized traditional health services if they meet one of the criteria below:

1. Health center has health personnel who have been trained in traditional healthcare;
2. Health center implements health self care program on traditional health potions and skills;
3. Health center carries out development activities that include collecting data of traditional health, improving facilities for registration/licensing and technical guidance as well as monitoring traditional and complementary health services.

To improve the development of traditional health services, it requires comprehensive and systematic efforts on the action plan as the implementation of the Strategic Plan of the Ministry of Health of Year 2015-2019.

In 2015, 1,532 health centers were recorded to have organized traditional health services, or 15.7%. of 9,754 health centers in 34 provinces in Indonesia. These results indicate that the target of the Strategic Plan in 2015 has been achieved.

FIGURE 2.7
NUMBER OF HEALTH CENTERS PROVIDING TRADITIONAL HEALTH SERVICES
IN INDONESIA, 2015



Source: Directorate General of Health Services, Ministry of Health RI, 2016

The highest number of health centers in organizing traditional health services belongs to the province of South Sulawesi, amounting to 135 health centers, followed by North Sumatera with 99 health centers and Banten with 92 health centers. Provinces of West Papua, Jambi and South Kalimantan are those with the lowest number of health centers in organizing traditional health services, with 7, 9, and 10 health centers respectively.

For better illustration, based on provinces, of hospitals with trained acupuncture and herbs personnel, as well as number of health centers, districts/municipalities, and the percentage of districts/municipalities having organized traditional health services, see Annex 2.3 and Annex 2.4.

B. HOSPITAL

In order to improve the health status of the community, in addition to promotive and preventive efforts, it also requires curative and rehabilitative ones. Both curative and rehabilitative health efforts can be obtained from the hospital, which also serves as a referral healthcare provider.

Regulation of the Minister of Health Number 147/Menkes/PER/I/2010 regarding Hospital Licensing classifies hospitals based on ownership, namely public hospital and private hospital. Public hospital is a hospital that is run by the government, local governments and non-profit legal entities. Private hospital, on the other hand, is a hospital run by a private entity which aims for profit in the form of a limited liability company or limited company.

1. Types of Hospital

In 2015, there were 2,488 hospitals in Indonesia from both categories of Public Hospital and Private Hospital. Public hospitals in Indonesia are managed by the Ministry of Health, Provincial Government, District/Municipal Government, Army/Police, other ministries and the non-profit private organizations (religious and social). The number of public hospitals in Indonesia until 2015 was 1,593, comprising 1,341 public hospitals (*RSU* or *Rumah Sakit Umum*) and 252 specialized hospitals (*RSK* or *Rumah Sakit Khusus*).

Unlike public hospitals, private hospitals are managed by state-owned enterprises and private entities (individuals, companies and other private sectors). In 2015 there were 895 private hospitals in Indonesia, consisting of 608 public hospitals and 287 specialized hospitals.

The number of public and private hospitals showed an increase during the period from 2013 to 2014, and slightly decreased in 2015 as shown in Table 2.1.

Law Number 44 Year 2009 on Hospital categorizes hospitals, based on the type of services provided, into general hospitals and specialized hospitals. General hospital is a hospital that provides health services in all areas and types of diseases. Specialized hospital is a hospital that provides key services in one area or one particular type of disease based on disciplines, ages, organs, diseases, or other specificities.

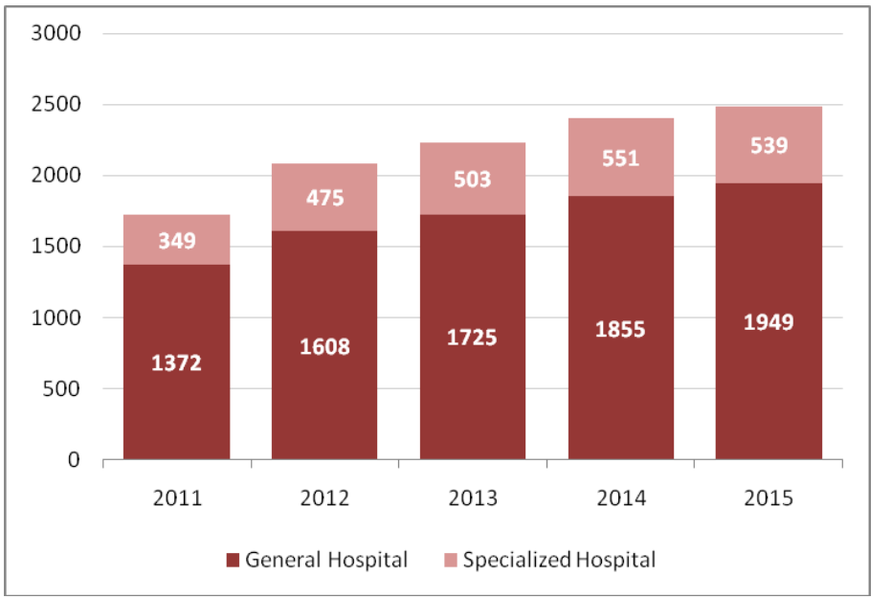
TABLE 2.1
NUMBER OF HOSPITALS BY OWNERSHIP
IN INDONESIA, 2013 – 2015

No	Ownership	2013	2014	2015
1	**Public Hospitals**			
	Ministry of Health and Local Government	676	687	713
	Army/Police	159	169	167
	Other Ministries	3	7	8
	Non Profit Private Organizations	724	736	705
	Total Public Hospitals	1,562	1,599	1,593
2	**Private Hospitals**			
	State-Owned Enterprises	67	67	62
	Private Entities	599	740	833
	Total Private Hospitals	666	807	895
	Total Hospitals	2,228	2,406	2,488

Source: Directorate General of Health Services, Ministry of Health RI, 2016

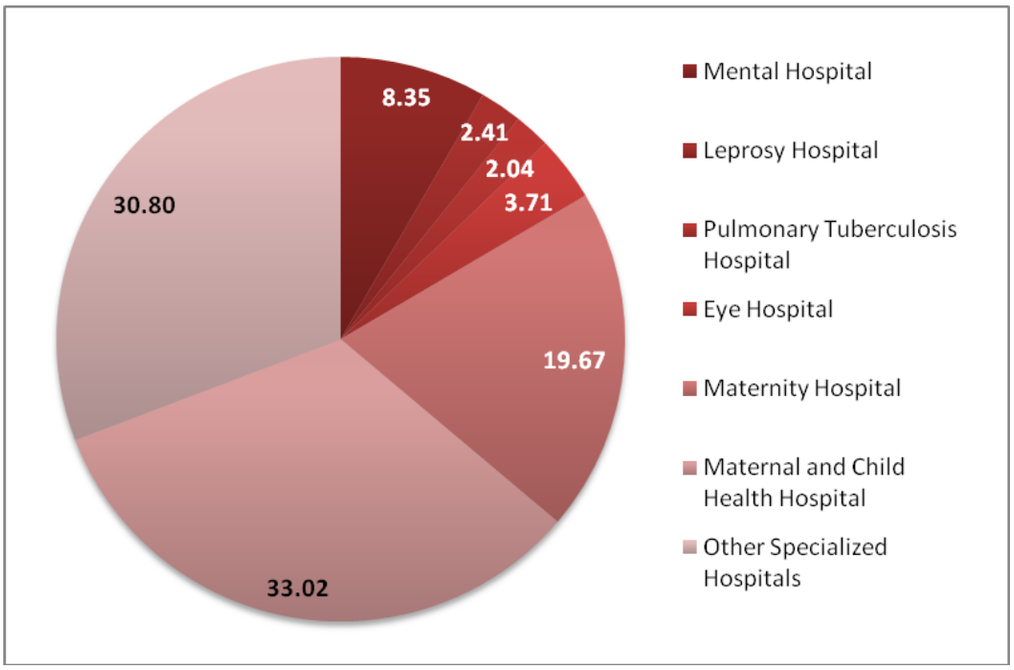
In 2015, there were 1,949 general hospitals and 539 specialized hospitals. The number of general hospitals continued to increase since 2011, while the number of specialized hospitals decreased slightly in 2015. The number of general hospitals and specialized hospitals in the last five years can be seen in the figure below.

FIGURE 2.8
TREND IN NUMBER OF GENERAL AND SPECIALIZED HOSPITALS
IN INDONESIA, 2011 - 2015



Source: Directorate General of Health Services, Ministry of Health RI, 2016

FIGURE 2.9
PERCENTAGE OF SPECIALIZED HOSPITALS BY TYPE
IN INDONESIA, 2015



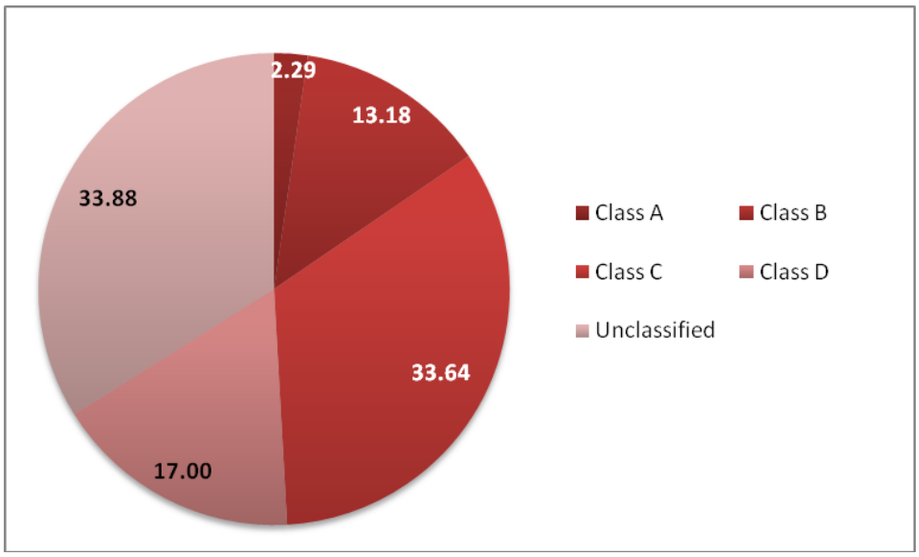
Source: Directorate General of Health Services, Ministry of Health RI, 2016

Figure 2.9 above shows that the Maternal and Child Health Hospital is the highest in number in Indonesia, amounting to 33.02% of total 539 Specialized Hospitals. In addition, the Maternity Hospital also has a sizeable proportion of 19.67%. On the other hand, Pulmonary Tuberculosis Hospital and Leprosy Hospital amounted to only 2.04% and 2.41% of all Specialized Hospitals in Indonesia.

2. Hospital Classes

Besides by the type of service, hospital is also grouped by the facilities and services into Class A, Class B, Class C and Class D. In 2015, there were 57 hospitals with class A, 328 with class B, 837 with class C, 423 with class D, and as many as 843 hospitals had not been classified.

FIGURE 2.10
PERCENTAGE OF HOSPITALS IN INDONESIA BY CLASS, 2015

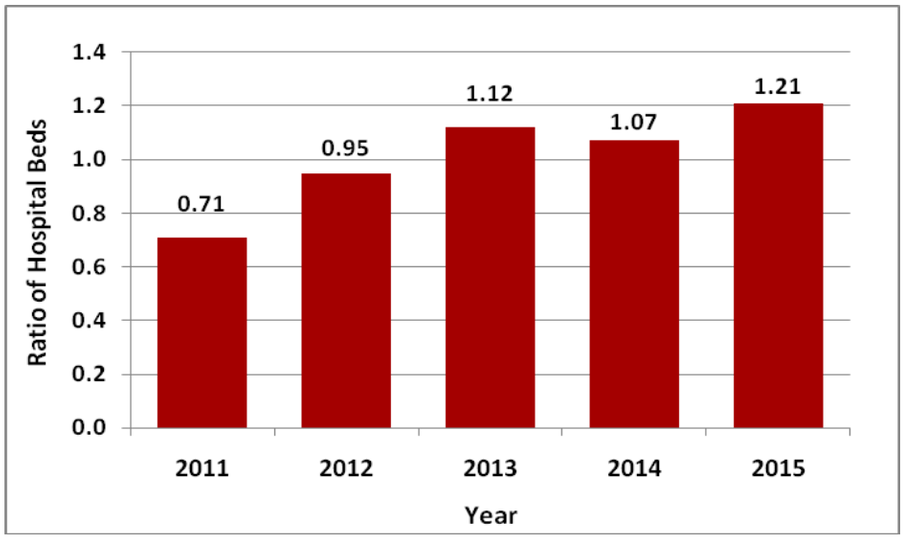


Source: Directorate General of Health Services, Ministry of Health RI, 2016

3. Hospital Beds

The needs for referral and personal health services in an area and whether they are met can be seen from the ratio of beds to 1,000 population. The ratio of beds in hospitals in Indonesia in 2015 amounted to 1.21 per 1,000 population. This ratio is higher than that in 2014, amounting to 1.07 per 1,000 population. With this increase it is expected that the need for beds can be provided. The ratio of beds in hospitals in Indonesia from 2011 to 2015 is shown in Figure 2.11.

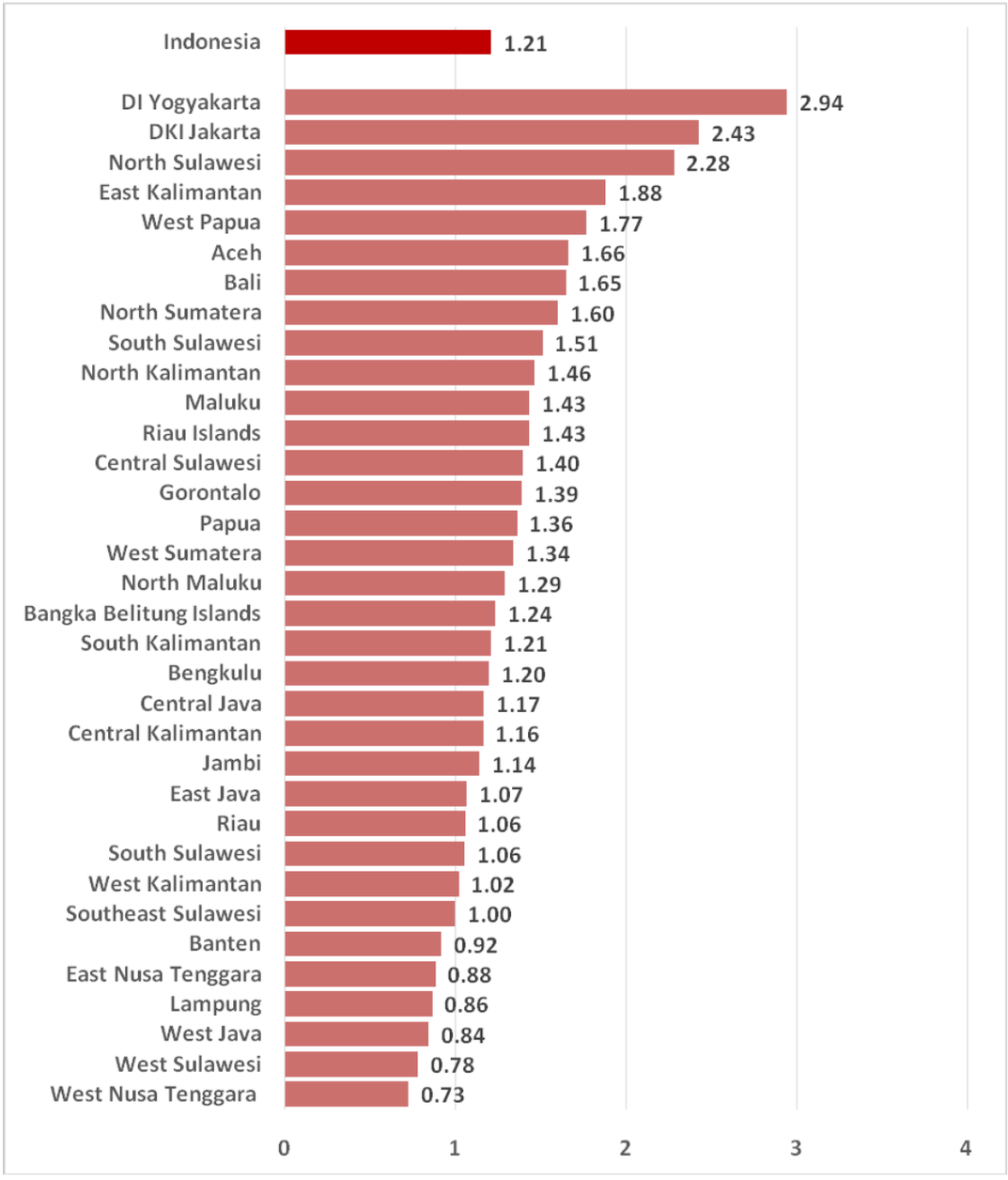
FIGURE 2.11
RATIO OF HOSPITAL BEDS
PER 1,000 POPULATION IN INDONESIA, 2011 – 2015



Source: Directorate General of Health Services, Ministry of Health RI, 2016

Although the ratio of beds to population in Indonesia in 2015 was sufficient, when viewed per province there were six provinces with insufficient ratio, namely Banten (0.92), East Nusa Tenggara (0.88), Lampung (0.86), West Java (0.84), West Sulawesi (0.78), and West Nusa Tenggara (0.73). More details of the ratio of beds to population are presented in Figure 2.12.

FIGURE 2.12
RATIO OF HOSPITAL BEDS PER 1,000 POPULATION IN INDONESIA, 2015



Source: Directorate General of Health Services, Ministry of Health RI, 2016

The highest ratio of hospital beds belongs to the provinces of DI Yogyakarta (2.94), DKI Jakarta (2.43), and North Sulawesi (2.28). More detailed information about hospitals by province can be found in Annexes 2.5, 2.6, 2.7, 2.8, and 2.9.

C. FACILITIES OF PHARMACEUTICALS AND MEDICAL DEVICES

1. PRODUCTION AND DISTRIBUTION FACILITIES OF PHARMACEUTICALS AND MEDICAL DEVICES

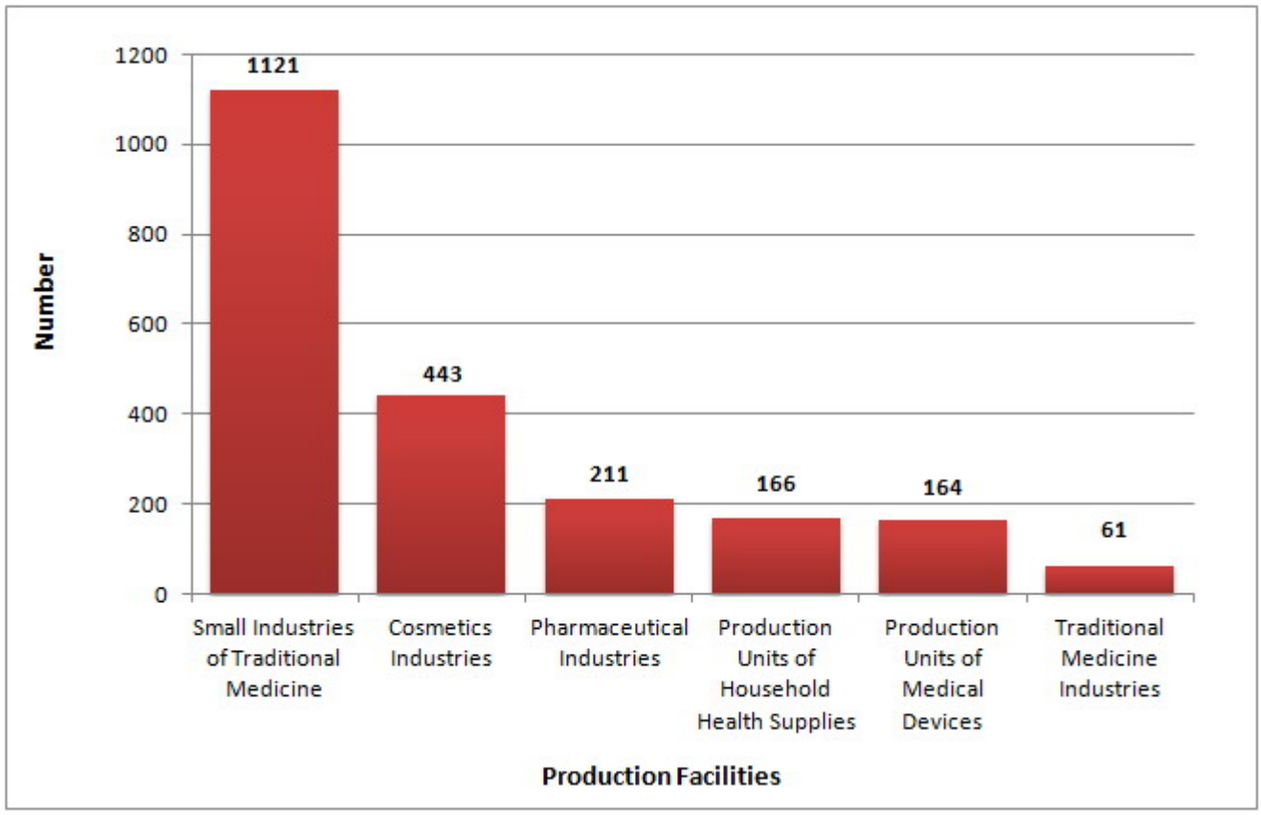
The availability of pharmaceuticals and medical devices has a significant role in healthcare. Community access to drugs, especially to those essential, is one of human rights. Thus the provision of essential medicines is an obligation for the government and healthcare institutions, either public or private. As a special commodity, the safety, efficacy and quality of all drugs in circulation should be guaranteed in order to provide health benefits. Therefore, in addition to increasing the number of trained managers, one of the efforts made to ensure the quality of medicines to the hands of the consumers is to provide a means of storage of pharmaceuticals and medical devices that can maintain the physical security as well as the quality of drugs.

One policy of Drugs and Medical Supplies Program is to improve access to and quality of supplies of pharmaceuticals, medical devices, and household health supplies (*PKRT* or *Perbekalan Kesehatan Rumah Tangga*) in accordance with the duties and functions of the Directorate General of Pharmaceuticals and Medical Devices to improve the availability, distribution, and affordability of medicines and medical devices as well as to ensure the safety, efficacy, benefit and quality of pharmaceuticals, medical devices, and food. It aims to protect the public from harm caused by the abuse of pharmaceutical and medical devices preparations, from their incorrect / improper uses, or from the failure of meeting the quality of safety and utilization (from the process of production, distribution to their use in the community). The coverage of production facilities of pharmaceuticals and medical devices illustrates the level of availability of healthcare facilities in their efforts to produce pharmaceuticals and medical devices. Production facilities of pharmaceuticals and medical devices include, among others, Pharmaceutical Industries, Traditional Medicine Industries (*IOT* or *Industri Obat Tradisional*), Small Industries of Traditional Medicine (*UKOT* or *Usaha Kecil Obat Tradisional*), Micro Industries of Traditional Medicine (*UMOT* or *Usaha Mikro Obat Tradisional*), Production Units of Medical Devices (*Alkes* or *Alat Kesehatan*), Production Units of Household Health Supplies (*PKRT*) and Cosmetics Industries.

Production and distribution facilities in Indonesia still indicate inequalities in the distribution. Most of the production and distribution facilities are located on the islands of Sumatra and Java, with 94.7% for production facilities and 77.0% for distribution facilities. The availability is related to the available resources and the needs of the local area. This condition can be used as a reference in the number of policies to increase the production and distribution facilities of pharmaceuticals and medical devices in other parts of Indonesia, which will result in even distribution of the number of such facilities throughout Indonesia. In addition, it aims to open public access to the affordability of health facilities in the field of pharmaceuticals and medical devices.

Total production facilities in 2015 amounted to 2,166. The province with the highest number of production facilities is West Java, amounting to 504 facilities. This may be due to the fact that West Java has a large population and a vast territory. The number of production facilities of pharmaceuticals and medical devices in 2015 can be seen in the figure below:

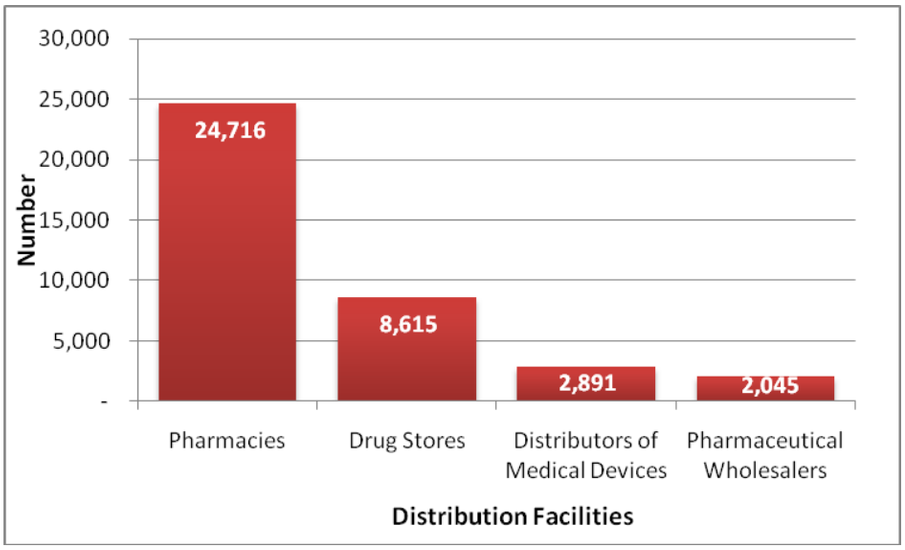
FIGURE 2.13
TOTAL PRODUCTION FACILITIES OF PHARMACEUTICALS AND MEDICAL DEVICES IN INDONESIA, 2015



Source: Directorate General of Pharmaceuticals and Medical Devices, Ministry of Health RI, 2016

Distribution facilities of pharmaceuticals and medical devices are monitored in number by the Directorate General of Pharmaceuticals and Medical Devices. Those facilities include Pharmaceutical Wholesalers (*PBF* or *Pedagang Besar Farmasi*), Pharmacies, Drug Stores, and Distributors of Medical Devices (*PAK* or *Penyalur Alat Kesehatan*). There were 38,267 distribution facilities of pharmaceuticals and medical devices in 2015. The amount increased compared to that of 2014, which amounted to 35,566. The following figure shows the number of distribution facilities of pharmaceuticals in 2015.

FIGURE 2.14
NUMBER OF DISTRIBUTION FACILITIES OF PHARMACEUTICALS AND MEDICAL DEVICES IN INDONESIA, 2015



Source: Directorate General of Pharmaceuticals and Medical Devices, Ministry of Health RI, 2016

More details on the number of production and distribution facilities of pharmaceuticals by province can be found in Annexes 2.16 and 2.17.

2. Availability of Drugs and Vaccines

In an effort to increase the availability of quality drugs, vaccines and medical supplies that are equitably distributed and affordable for public healthcare, the Ministry of Health has set achievement indicators of the strategic plan of 2015-2019 concerning pharmaceuticals and medical devices program, namely improvement on access and quality of pharmaceuticals, medical devices, and household health supplies (*PKRT*). The achievement of the objectives in 2015 was indicated by the availability of drugs and vaccines in health centers by 77%.

The availability of drugs at the level of health centers in 2015 is monitored to support the central and local governments in determining the policy measures to be taken in the future. In the era of regional autonomy, pharmaceutical management is one of the authorities handed over to districts/municipalities. The drugs are then distributed to health centers in each district/municipality. The absence of periodic reports from health centers will make it relatively difficult for the central government to define the steps that must be done. The data availability of drugs in provinces or districts/municipalities will facilitate prioritization of aids and program intervention in the future.

It is necessary to monitor the availability of drugs and vaccines in Indonesia to get an overview of it. The monitored pharmaceuticals are those that function as indicators in primary healthcare and those that support the implementation of health programs. There are 20 drugs and vaccines listed to be monitored. As many as 1,328 health centers are selected to

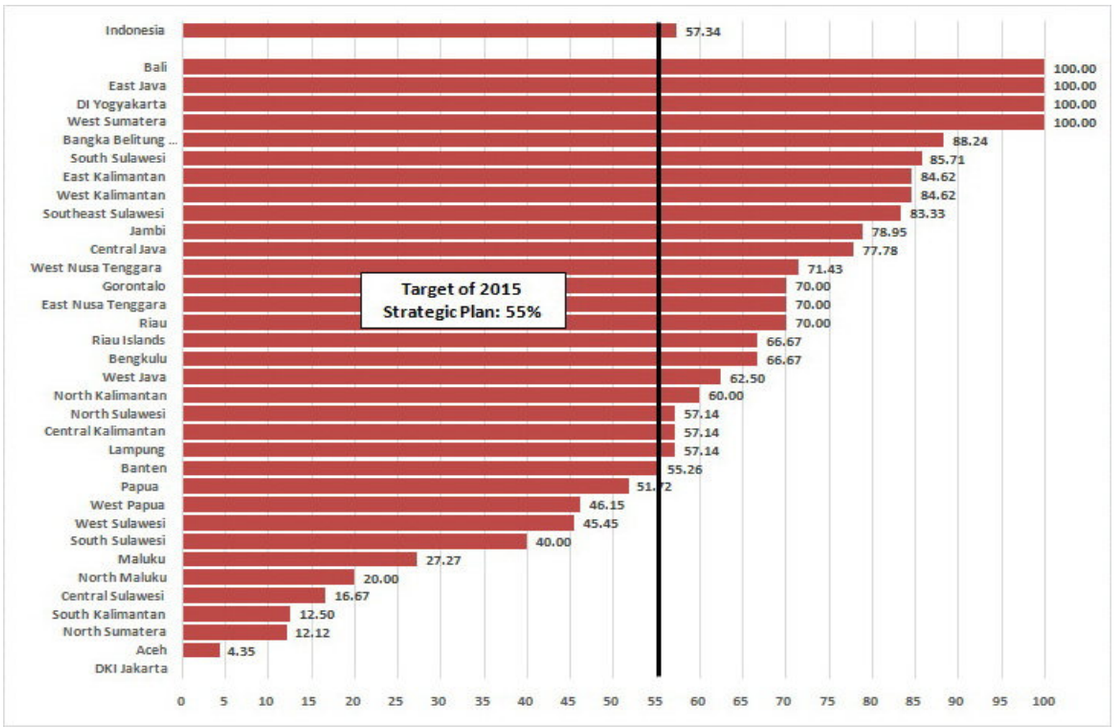
be monitored for the availability of the listed drugs and vaccines. The health centers are selected using proportional province-based random sampling method by the number of health centers and the ratio of health centers with beds to those without.

Based on data collection and calculations performed by the Directorate General of Pharmaceuticals and Medical Devices, it was found that 79.38% of essential drugs and vaccines were available at the health center. The finding suggests that the availability of drugs and vaccines in health centers had achieved the target of the 2015 Strategic Plan, which was 77%. More detailed data and information on health centers that provide 20 items of drugs and vaccines can be found in Annex 2.18.

3. Pharmacy Installations of Districts/Municipalities Performing Standard Management of Medicines and Vaccines

The Strategic Plan of the Ministry of Health also monitors pharmacy installations of districts/municipalities that perform standard management of medicines and vaccines. In 2015 in Indonesia, 57.34% pharmacy installations of districts/municipalities were recorded to have implemented it. Thus, the target of the 2015 Strategic Plan, which was 55%, had been met.

FIGURE 2.15
PERCENTAGE OF PHARMACY INSTALLATIONS OF DISTRICTS/MUNICIPALITIES PERFORMING STANDARD MANAGEMENT OF MEDICINES AND VACCINES IN INDONESIA, 2015



Source: Directorate General of Pharmaceuticals and Medical Devices, Ministry of Health RI, 2016

In the Figure above it is found that most of the provinces met the target of 55% of 2015 Strategic Plan, i.e. 23 provinces (67.65%). There were 11 provinces that had not. More detailed data and information about the pharmacy installations of districts/municipalities that implemented the standard management of medicines and vaccines by province can be found in Annex 2.19.

D. EDUCATIONAL INSTITUTES FOR HEALTH PERSONNEL – POLYTECHNICS OF HEALTH

1. Number of Polytechnics of Health

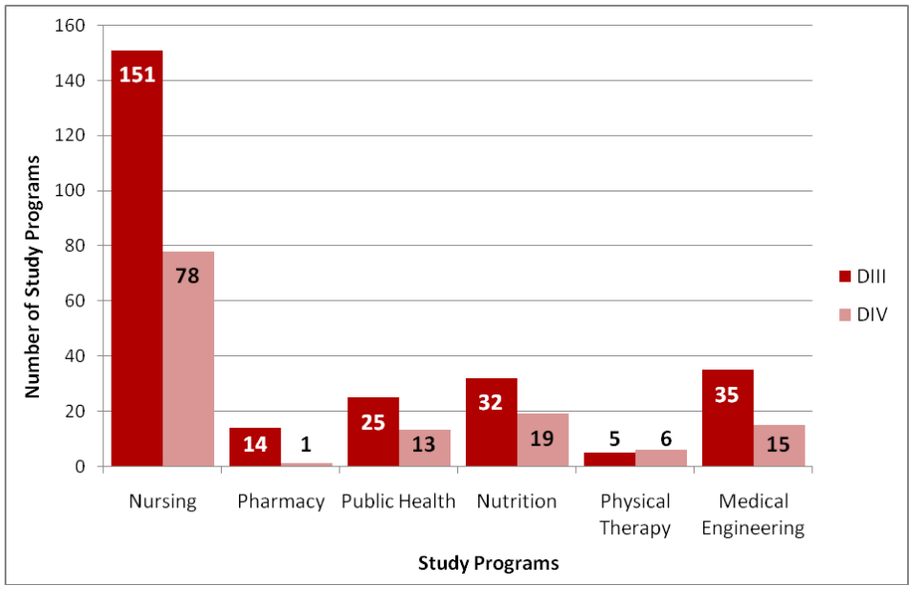
Sustainable health development requires adequate health personnel in terms of type, quantity and quality. To produce quality health personnel, it certainly requires quality education process as well. The Ministry of Health is the institution from the government sector who plays an important role in the provision of such qualified health personnel.

In order to improve the quality of healthcare through quality assurance and competence of health personnel graduates of educational institutes, the government issued a Joint Decree of the Minister of Education and Culture and the Minister of Health Number 355/E/O/2012 concerning Authority Transfer of Study Programs Management of Polytechnic of Health of the Ministry of Health to the Ministry of Education and Culture, and updated by the Decree of the Minister of Education and Culture Number 507/E/O/2013 concerning Amendments to the Decree of the Minister of Education and Culture Number 355/E/O/2012. Thus, academic supervision of Polytechnic of Health (*Poltekkes* or *Politeknik Kesehatan*) is the responsibility of the Ministry of Education and Culture, but supervision of sectors beyond academic areas, such as technical areas, remains the responsibility of the Ministry of Health.

Health educational institutes for non medical staff include Polytechnics of Health Personnel (*Poltekkes*) and Polytechnic of Non Health Personnel (Non *Poltekkes*). The Ministry of Health is responsible for the technical development of *Poltekkes* institutes. As of December 2015 there were 38 *Poltekkes* in Indonesia, with 132 departments/study programs for Diploma IV, and 262 departments/study programs for Diploma III. There are six departments that *Poltekkes* offers, namely:

1. Nursing, with the following programs: Nursing, Midwifery, and Dental Nursing.
2. Pharmacy, with the sole program: Pharmacy
3. Public Health, with the sole program: Environmental Health
4. Nutrition
5. Physical Therapy, with the following programs: Physiotherapy, Occupational Therapy, Speech Therapy, and Acupuncture
6. Medical Engineering, with the following programs: Health Analyst, Electromedical Engineering, Diagnostic Radiology, and Orthotics and Prosthetics.

FIGURE 2.16
NUMBER OF STUDY PROGRAMS OF POLTEKKES FOR DIPLOMA III AND IV IN INDONESIA, 2015



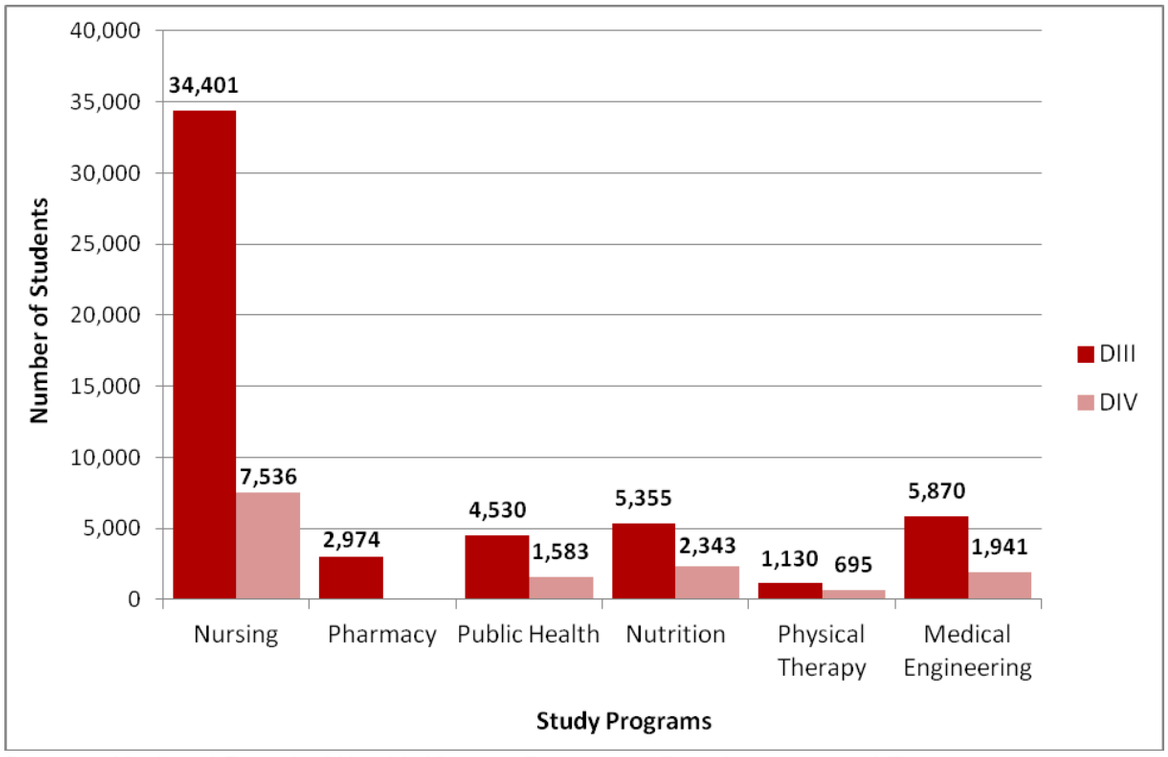
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

Nursing study program is the highest in number in all *Poltekkes* in Indonesia, both for Diploma III and Diploma IV, i.e. as many as 151 programs for Diploma III (57.6%) and 78 for Diploma IV (59.4%). Physical Therapy is the lowest, only 5 programs for Diploma III and 6 for Diploma IV. Meanwhile, only one Poltekkes offers Pharmacy program for Diploma IV, namely *Poltekkes* Makassar. More detailed data and information on the number of study programs in *Poltekkes* institutes can be found in Annexes 2.11 and 2.13.

2. Students

Students of Diploma III in all *Poltekkes* in Indonesia until December 2015 amounted to 54,260 people, while the students of Diploma IV amounted to 14,098 people. The highest number of students come from Nursing study program, with as many as 34,401 students for Diploma III and 7,536 for Diploma IV.

FIGURE 2.17
NUMBER OF POLTEKKES STUDENTS OF DIPLOMA III AND IV
IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

More detailed data and information on the number of students in Poltekkes institutes can be found in Annexes 2.12 and 2.14.

CHAPTER III

HEALTH PERSONNEL

Chapter III
HEALTH PERSONNEL

Health human resources (*SDMK* or *Sumber Daya Manusia Kesehatan*) is one of the sub-systems of national health systems that has an important role in improving public health status through various efforts and health services, which must be performed by skilled and authorized health personnel who have high responsibility and integrity.

According to Law Number 36 Year 2014 on Health Personnel, health personnel refers to everyone who devotes himself/herself to the health sector and has knowledge and/or skills acquired during his/her education in health sector which, for a certain sector, requires authority to perform.

In this chapter, we will discuss health human resources focusing on the number, the ratio, the registration, the number of graduates, and the employment of health personnel.

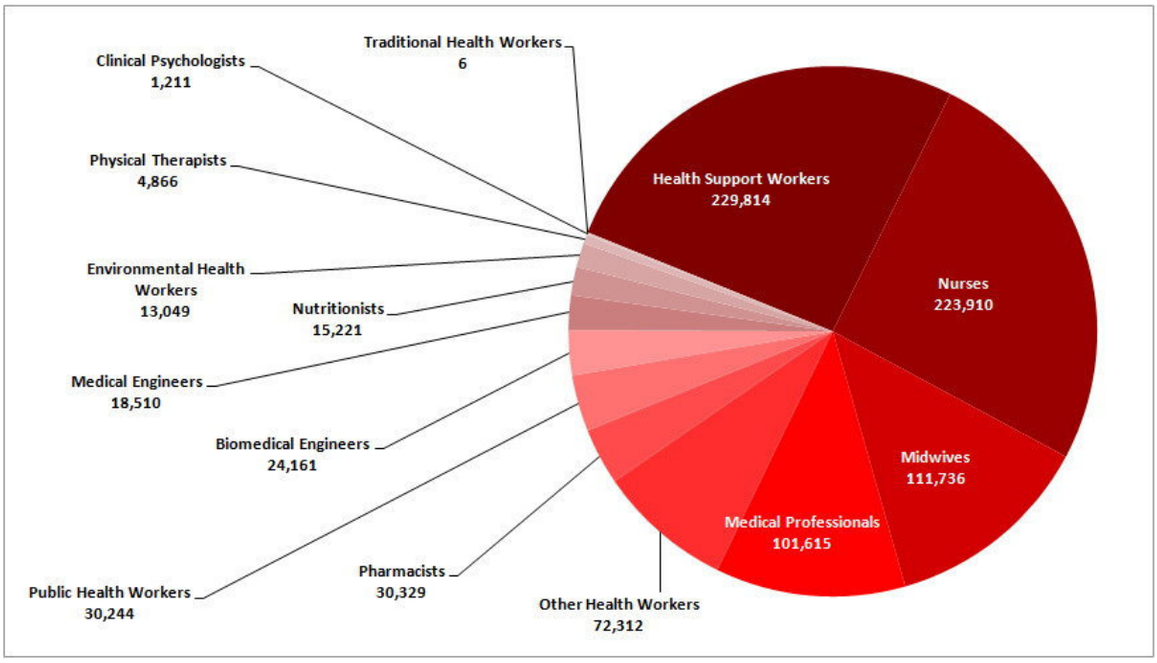
A. NUMBER OF HEALTH PERSONNEL

Health personnel is classified into health professional and health support worker. Health professional is sub-classified into several groups and sub groups. Health professional group according to Law Number 36 Year 2014 on Health Personnel Article 11 refers to medical professional, clinical psychologist, nurse, midwife, pharmaceutical professional, public health worker, environmental health worker, nutritionist, physical therapist, medical engineer, biomedical engineer, traditional health worker, and other health workers.

In 2015, total health human resources in Indonesia amounted to 876,984 people, comprising 647,170 health professionals (73.8%) and 229,814 health support

workers (26.2%). The health professional that was recorded to be the highest in number in 2015 was the nurses, amounting to 223,910 people or 34.6% of total health personnel, and the lowest in number was traditional health workers, amounting to only 6 or 0.001% of total health personnel. The provinces with the highest number of health professionals, mostly concentrated in Java island, were Central Java (76,819 people), East Java (69,405 people) and West Java (66,152 people). The province with the lowest number of health professionals was North Kalimantan with as many as 2,887 people. Full details regarding the recapitulation of health human resources in Indonesia can be seen in Annex 3.1.

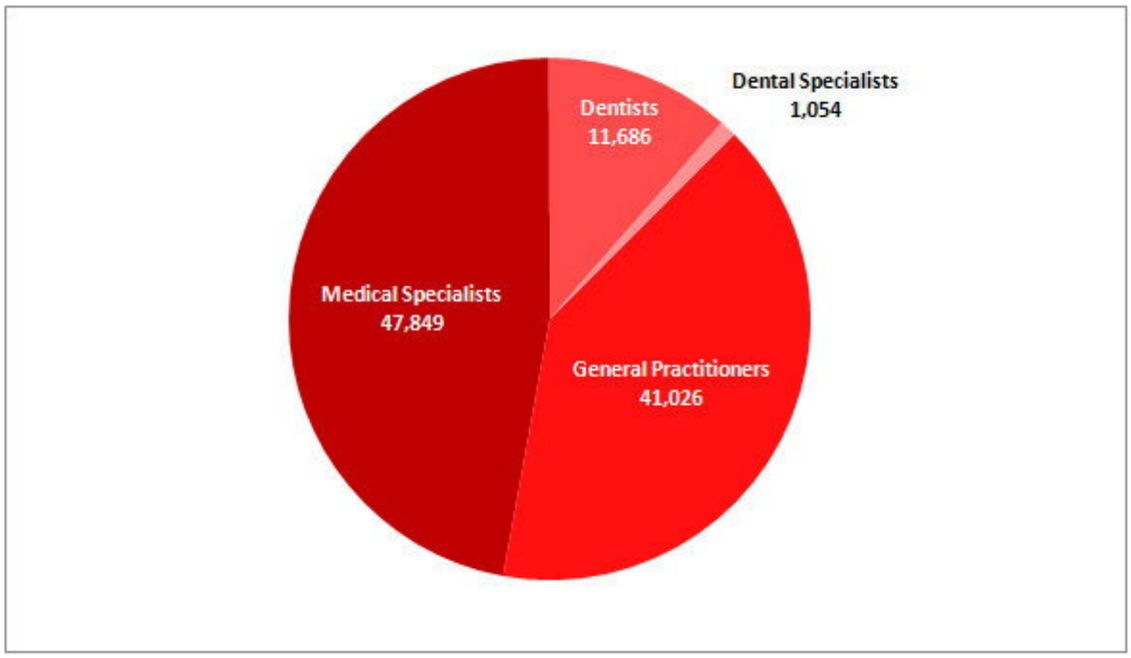
FIGURE 3.1
RECAPITULATION OF HEALTH HUMAN RESOURCES IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

Medical professional by function refers to one who provides services in healthcare facilities according to his/her function. The highest number of medical professionals belonged to medical specialist, amounting to 47,849 people (47.1%). This may be due to the fact that more general practitioners work in the field of management, which is not their intended purpose in medical services. Additionally, this data does not include individual-practice physicians. A total of 54.2% of medical professionals were operating in Java island with the highest number in the provinces of West Java (14,272 people), East Java (12,205 people), and Central Java (11,782 people). The provinces with the lowest number of medical professional were West Sulawesi (310 people), North Kalimantan (314 people), and West Papua (372 people).

FIGURE 3.2
NUMBER OF MEDICAL PROFESSIONALS IN INDONESIA, 2015



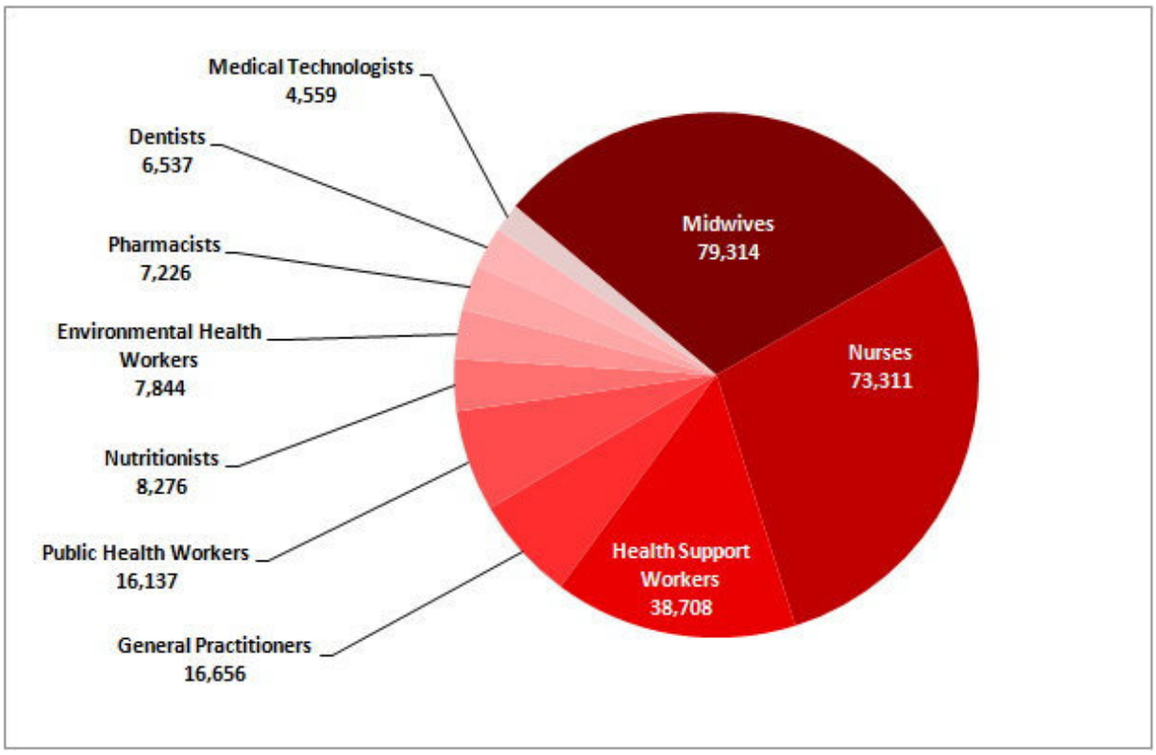
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

1. Health Personnel in Health Centers

Based on the Regulation of the Minister of Health Number 75 Year 2014 regarding Health Centers, Health Center refers to a health facility that organizes both public health efforts and individual health efforts in the primary level, with more emphasis on promotive and preventive efforts, to achieve the optimal public health status in its working area. To support the function and purpose of a health center, both health professionals and health support workers are equally essential as the health human resources.

In that Regulation, Article 16 Paragraph 3 states that at minimum the health personnel in a health center should include physicians or primary care physicians, dentists, nurses, midwives, public health workers, environmental health workers, medical technologists, nutritionists, and pharmacists. Health support workers, meanwhile, should be able to support the administration, financial administration, information systems, and other operational activities.

FIGURE 3.3
NUMBER OF HEALTH HUMAN RESOURCES IN HEALTH CENTERS
IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

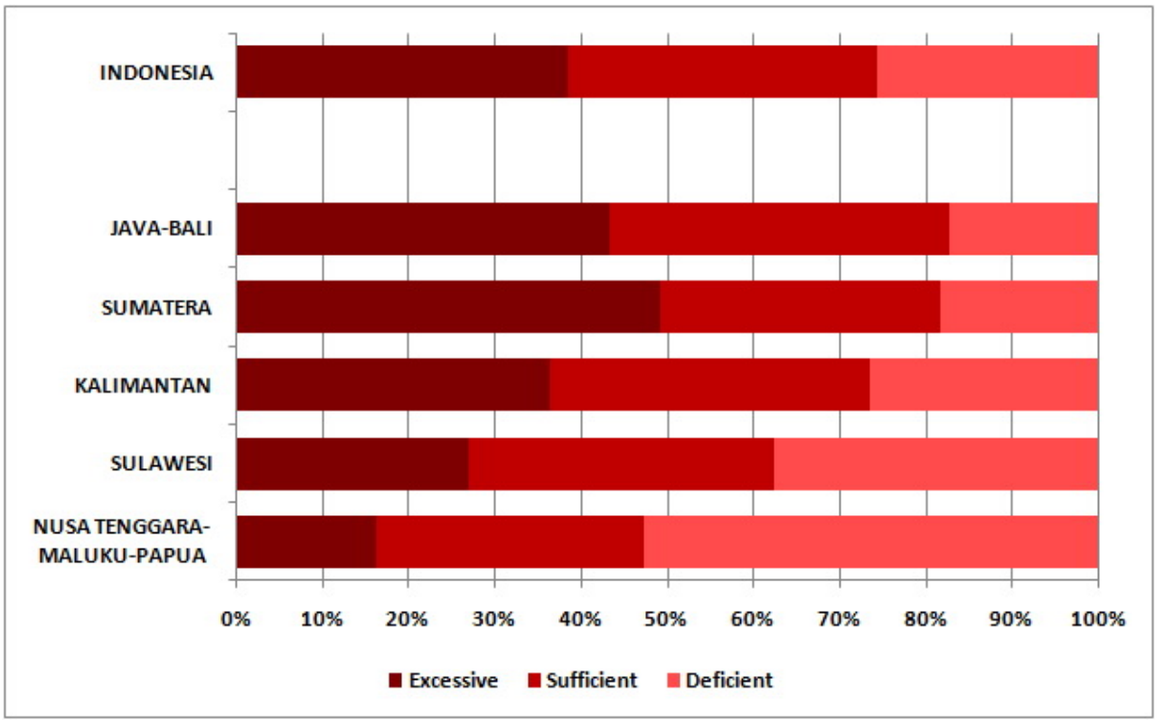
Total health human resources in health centers in Indonesia in 2015 amounted to 258,568 people, comprising 219,860 health professionals (85.03%) and 38,708 health support workers (14.97%). The highest proportion of health professionals in most health centers belonged to midwives at 30.67% (79,314 people), while the lowest belonged to medical technologists at 1.76% (4,559 people).

The number and type of health professionals in health centers are calculated based on workload analysis by considering a number of things, among others the number of services organized, the population and the distribution, the characteristics and the extent of the working area, the availability of other healthcare facilities in the primary level of the working area, and the distribution of working time.

Sufficiency of Physicians in Health Centers

An outpatient health center is required to employ at minimum one physician, while an inpatient health center two physicians, be it in urban, rural, remote or very remote areas. In Figure 3.4, we can see that in Indonesia in 2015 as many as 38.53% health centers exceeded the standard number of physicians employed, 35.9% had sufficient number, and 25.57% were lacking. By regions, the largest proportion of health centers with sufficient and even excessive number of physicians belonged to Java-Bali region (82.8%) and Sumatra region (81.7%), while the largest proportion of health centers with deficient number of physicians belonged to Nusa Tenggara-Maluku-Papua region (52.78%).

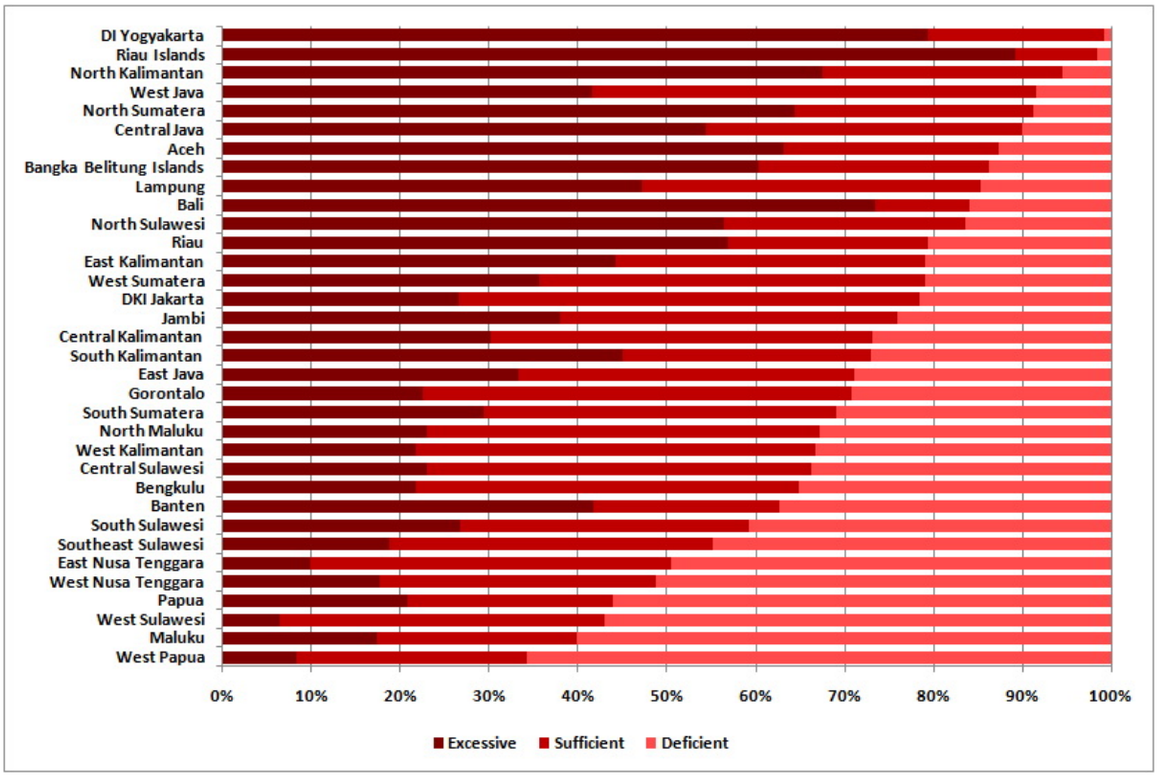
FIGURE 3.4
PERCENTAGE OF HEALTH CENTERS WITH SUFFICIENT NUMBER OF PHYSICIANS BY REGIONS IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

When viewed by province, the provinces with the highest percentage of health centers with sufficient and even excessive number of physicians were DI Yogyakarta (99.17%), Riau Islands (98.46%), and North Kalimantan (94.59%). The provinces with the highest percentage of health centers with deficient number of physicians were West Papua (65.74%), Maluku (60.12%), and West Sulawesi (56.99%). Full details on the sufficiency of physicians in health centers can be seen in Annex 3.3.

FIGURE 3.5
SUFFICIENCY OF PHYSICIANS PERCENTAGE IN HEALTH CENTERS BY PROVINCE
2015

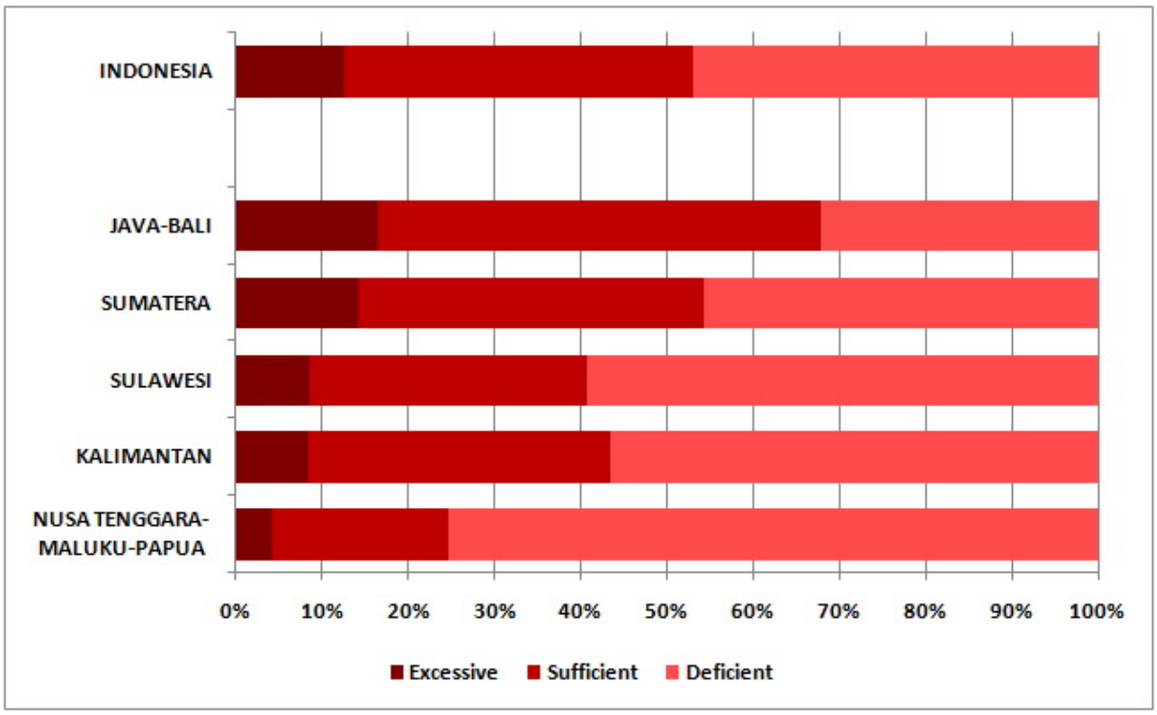


Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

Sufficiency of Dentists in Health Centers

A health center is required to employ at minimum one dentist, be it an inpatient or an outpatient health center, and be it in urban, rural, remote or very remote areas. In Indonesia in 2015, as many as 12.56% health centers exceeded the standard number of dentists employed, 40.46% had sufficient number, and 46.97% had no dentists available. By regions, the largest proportion of health centers with sufficient and even excessive number of dentists belonged to Java-Bali region (67.76%) and Sumatra region (54.29%), while the largest proportion of health centers with deficient number of dentists belonged to Nusa Tenggara-Maluku-Papua region (75.31%).

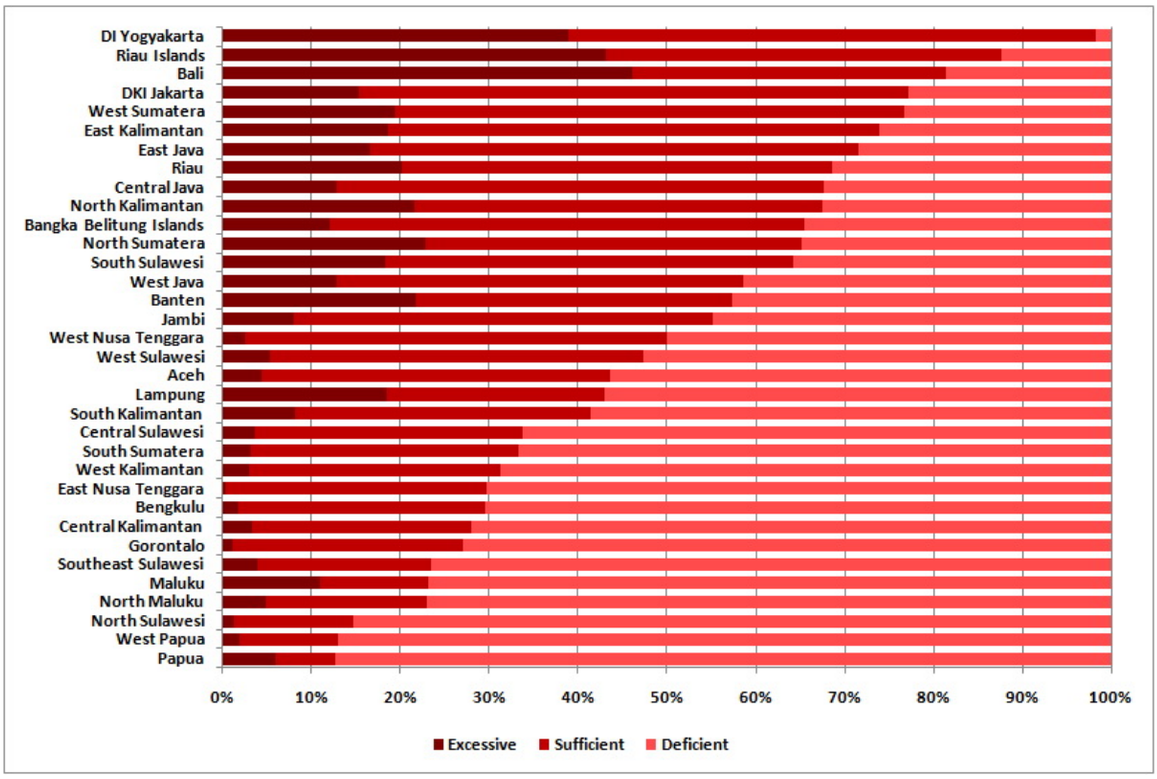
FIGURE 3.6
PERCENTAGE OF HEALTH CENTERS WITH SUFFICIENT NUMBER OF DENTISTS IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

By province, the provinces with the highest percentage of health centers with sufficient and even excessive number of dentists were DI Yogyakarta (98.35%), Riau Islands (87.69%), and Bali (81.42%). The provinces with the highest percentage of health centers with deficient number of dentists were Papua (87.31%), West Papua (87.04%), and North Sulawesi (85.29%). Full details on the sufficiency of dentists in health centers can be seen in Annex 3.3.

FIGURE 3.7
PERCENTAGE OF SUFFICIENCY OF DENTISTS IN HEALTH CENTERS
BY PROVINCE, 2015

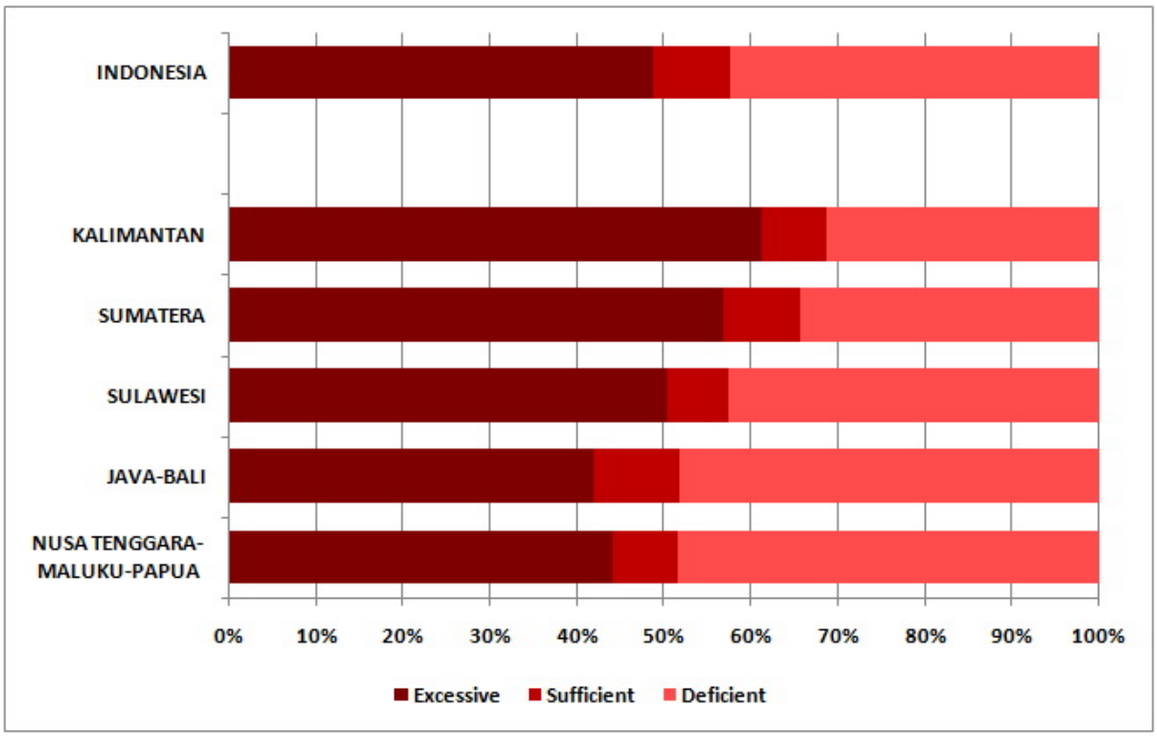


Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

Sufficiency of Nurses in Health Centers

An outpatient health center is required to employ at minimum five nurses, while an inpatient health center eight nurses. This is the minimum standard either in urban, rural, remote or very remote areas. In Indonesia in 2015 as many as 48.78% health centers exceeded the standard number of nurses employed, 8.76% had sufficient number, and 42.46% were lacking. By regions, the largest proportion of health centers with sufficient and even excessive number of nurses belonged to Kalimantan region (68.6%) and Sumatera region (65.66%). The largest proportion of health centers with deficient number of nurses belonged to Nusa Tenggara-Maluku-Papua region (48.47%) and Java-Bali region (48.20%).

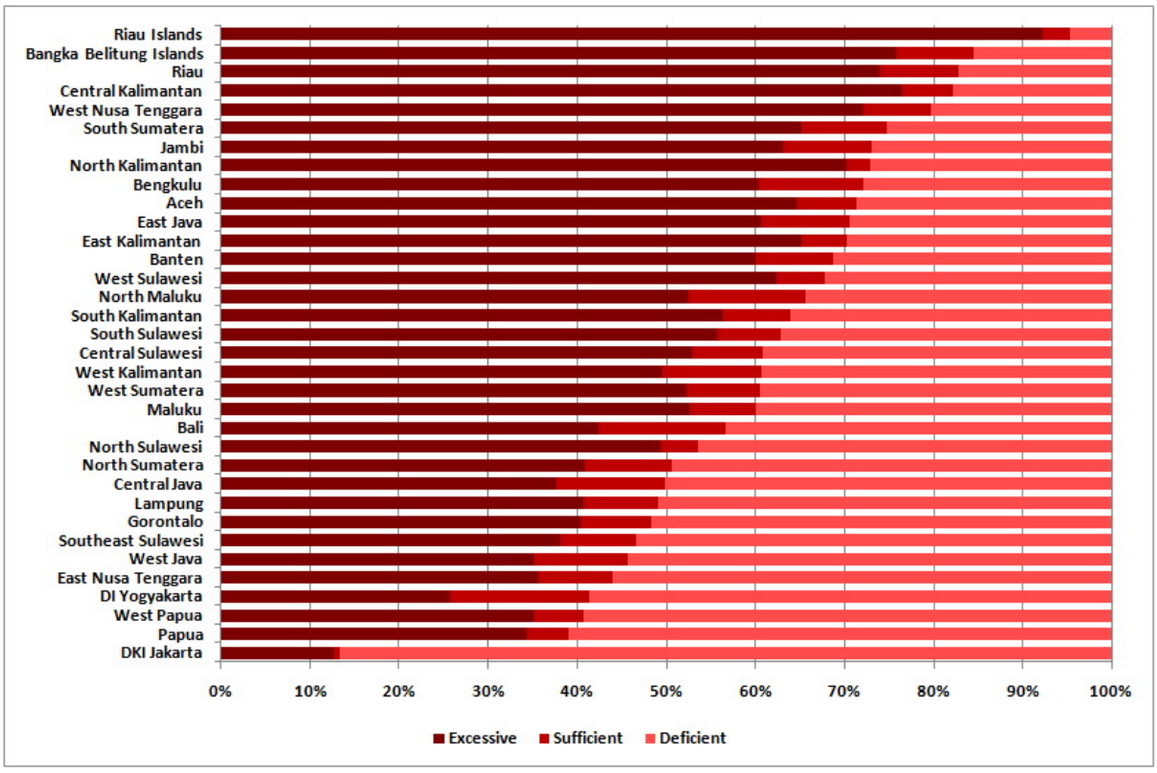
FIGURE 3.8
PERCENTAGE OF HEALTH CENTERS WITH SUFFICIENT NUMBER OF NURSES
IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

When we see the distribution, the provinces with the highest percentage of health centers with sufficient and even excessive number of nurses were Riau Islands (95.38%), Bangka Belitung Islands (84.48%), and Riau (82.84%).The provinces with the highest percentage of health centers with deficient number of nurses were DKI Jakarta (86.69%), Papua (60.99%), and West Papua (59.26%). Full details on the sufficiency of nurses in health centers can be seen in Annex 3.3.

FIGURE 3.9
SUFFICIENCY OF NURSES PERCENTAGE IN HEALTH CENTERS
BY PROVINCE, 2015

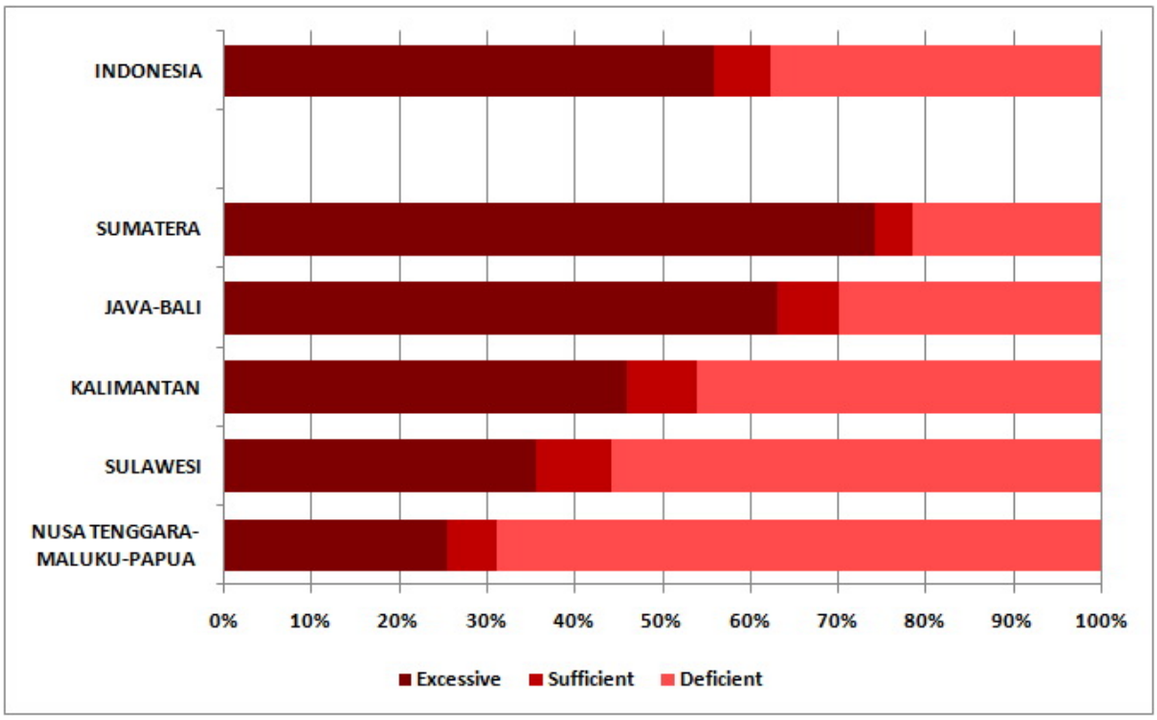


Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

Sufficiency of Midwives in Health Centers

An outpatient health center is required to employ at minimum four midwives, while an inpatient health center seven midwives. This is the minimum standard either in urban, rural, remote or very remote areas. In Figure 3.10, we can see that in Indonesia in 2015 as many as 56% health centers exceeded the standard number of midwives employed, 6.4% had sufficient number, and 37.6% were lacking. By regions, the largest proportion of health centers with sufficient and even excessive number of midwives belonged to Sumatra region (78.57%) and Java-Bali region (70.11%), while the largest proportion of health centers with deficient number of midwives belonged to Nusa Tenggara-Maluku-Papua region (68.85%).

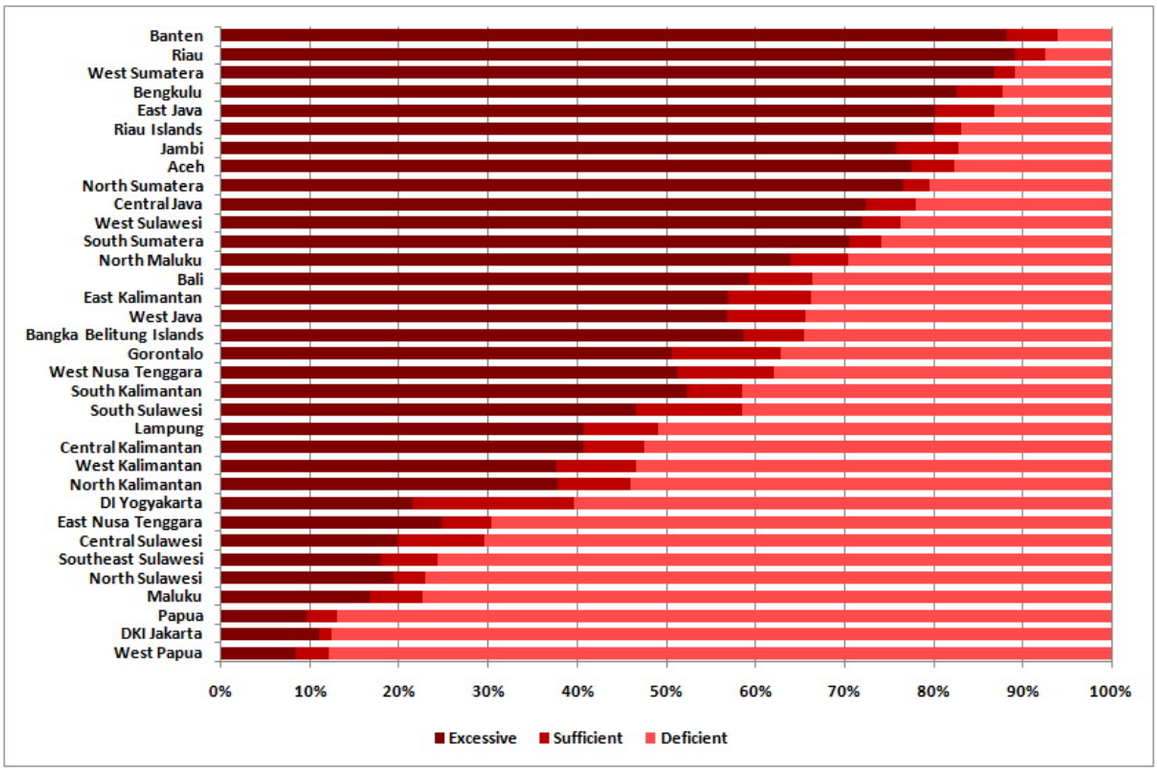
FIGURE 3.10
PERCENTAGE OF HEALTH CENTERS WITH SUFFICIENT NUMBER OF MIDWIVES IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

By province, the provinces with the highest percentage of health centers with sufficient and even excessive number of midwives were Banten (93.91%), Riau (92.65%), and West Sumatra (89.15%). The provinces with the highest percentage of health centers with deficient number of midwives were West Papua (87.96%), Jakarta (87.57%) and Papua (87%). Full details on the sufficiency of midwives in health centers can be seen in Annex 3.3.

FIGURE 3.11
SUFFICIENCY OF MIDWIVES PERCENTAGE IN HEALTH CENTERS
BY PROVINCE, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

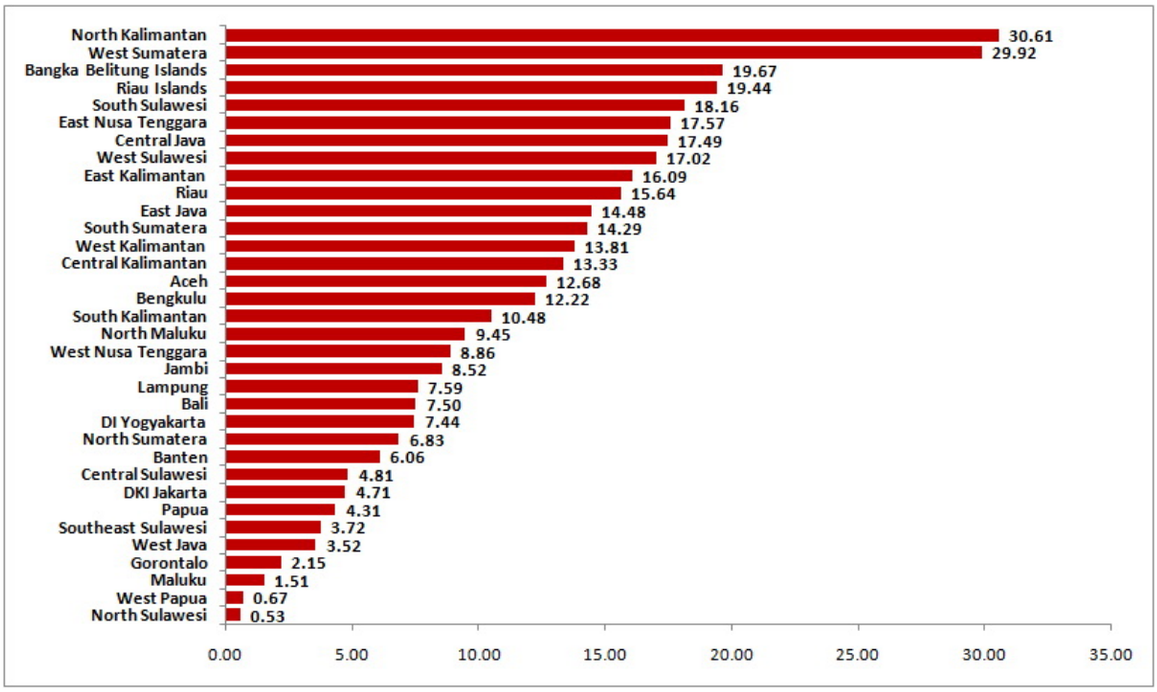
The sufficiency of health workers in health centers is analyzed based on the standard number of health professionals in health centers attached to the Regulation of the Minister of Health Number 75 Year 2015 regarding Health Centers. The results of the analysis are based on data collected from provincial health offices and have not been fully updated.

Number of Health Centers with Five Types of Promotive and Preventive Health Workers

In accordance with the Regulation of the Minister of Health Number 75 Year 2014 regarding Health Centers, health workers in health centers not only refers to medical professionals but also to promotive and preventive ones to support health centers in carrying out the tasks in organizing public health efforts. In the Strategic Plan of the Ministry of Health in 2015-2019, one of the indicators in improving the availability and quality of health human resources in compliance with the standards of healthcare is the number of health centers having five types of promotive and preventive health workers.

The health workers in question are environmental health worker, pharmaceutical professional, nutritionist, public health worker, and health analyst.

FIGURE 3.12
PERCENTAGE OF HEALTH CENTERS HAVING FIVE TYPES OF PROMOTIVE AND PREVENTIVE HEALTH WORKERS BY PROVINCE, 2015



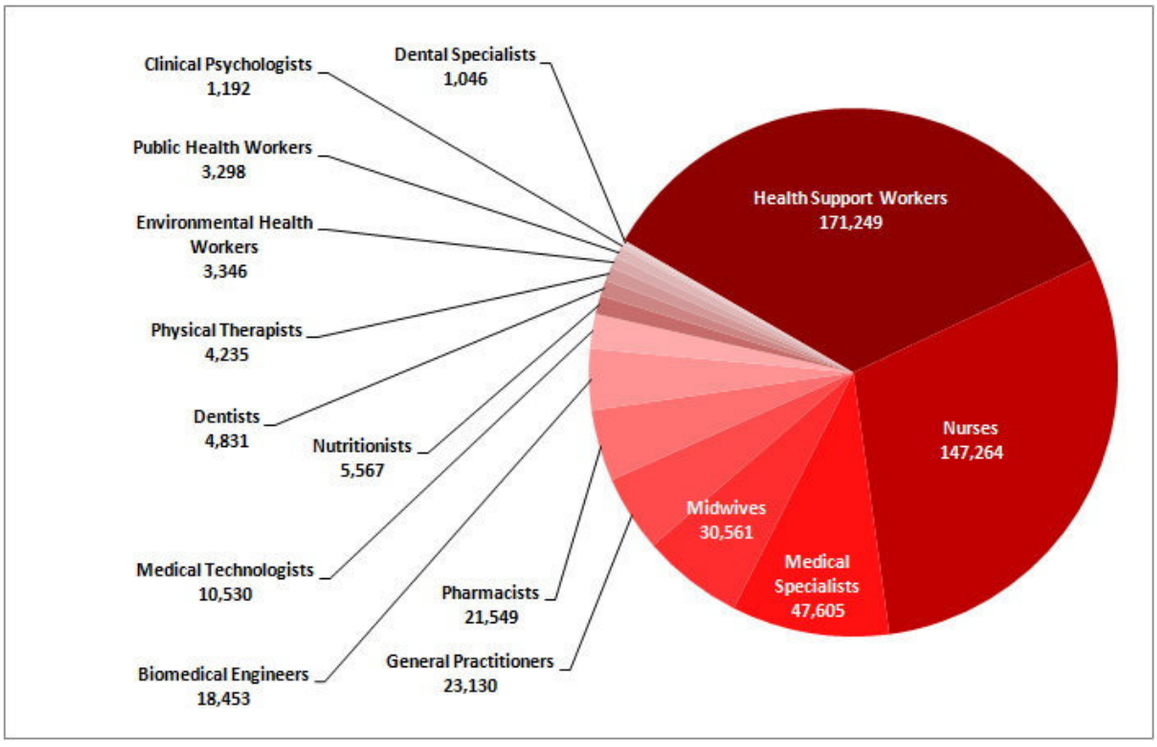
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

In 2015, there were 1,059 health centers employing five types of promotive and preventive health workers out of total 9,742 health centers that came with their data release. The target of the 2015 Strategic Plan of the Ministry of Health was yet to be achieved, which was set to 1,200 health centers. The provinces with the highest percentage of health centers having five types of promotive and preventive health professionals were the provinces of North Kalimantan (30.61%) and West Sumatra (29.92%), while the lowest were North Sulawesi (0.53%) and West Papua (0.67%). Full details on the number of health centers with five types of promotive and preventive health workers can be seen in Annex 3.4.

2. Health Personnel in Hospitals

According to the Regulation of the Minister of Health Number 56 Year 2014 regarding the Classification and Licensing of Hospitals, hospital refers to a healthcare institution which organizes comprehensive individual health services that provides for inpatient and outpatient treatment, and emergency department. Hospitals may be established and organized by the central government, local governments, and private organizations. Meanwhile, according to the services provided, hospital is classified into public hospitals and specialized hospitals.

FIGURE 3.13
NUMBER OF HEALTH HUMAN RESOURCES IN HOSPITALS IN INDONESIA
2015



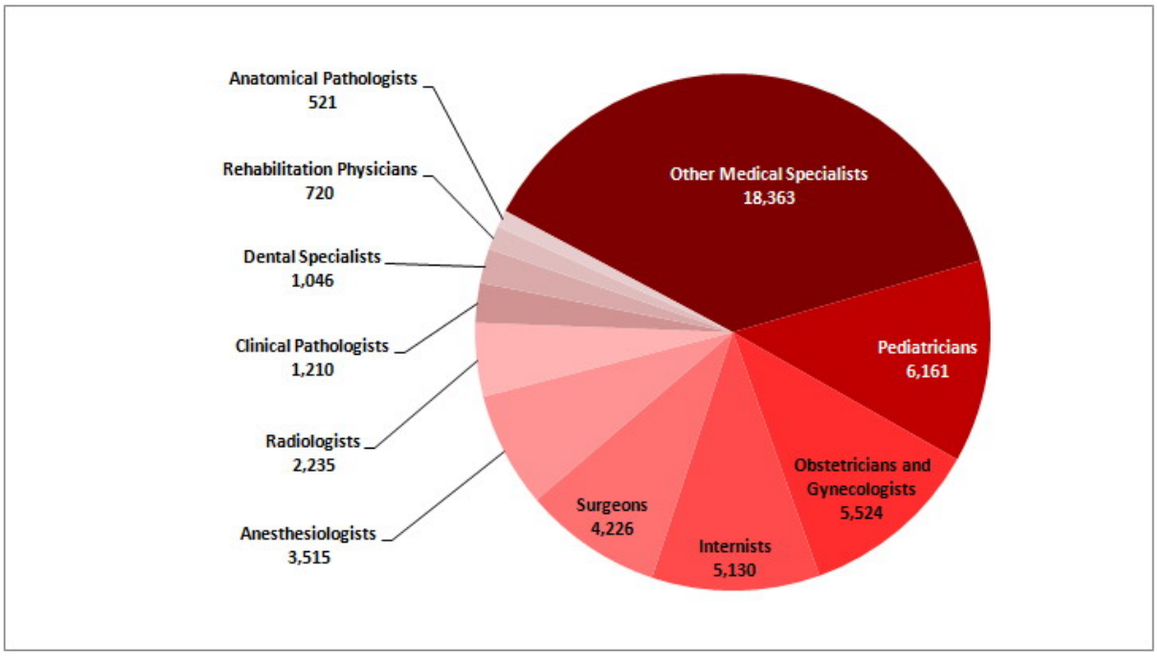
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

Total of health human resources in hospitals in 2015 were as many as 493,856 workers, comprising 322,607 health professionals (65.32%) and 171,249 health support workers (34.68%). The highest number of health professionals belonged to nurses, amounting to 147,264 people (45.65%) while the least number belonged to dental specialists, amounting to 1,046 people (0.32%). The provinces with the highest number of health professionals in hospitals were Central Java (44,885 people), East Java (39,742 people) and West Java (39,008 people). The province with the lowest number of

health professionals in hospitals was North Kalimantan (1,163 people). Full details on the number of health human resources in hospitals can be found in Annex 3.5.

The specialist services provided in hospitals include basic medical specialist, supporting specialist, other specialist, subspecialist, and dental and oral specialist. Basic medical specialist services include internal medicine, pediatrics, surgery, and obstetrics and gynecology. Supporting medical specialist services include anesthesiology, radiology, clinical pathology, anatomical pathology, and medical rehabilitation. Other medical specialist services include eye care, ear nose throat, nerves, heart and blood vessels, dermatology and genitals, psychiatry, pulmonary, orthopedics, urology, neurosurgery, plastic surgery, and forensic.

FIGURE3.14
NUMBER OF MEDICAL SPECIALISTS AND DENTAL SPECIALISTS IN HOSPITALS IN INDONESIA, 2015



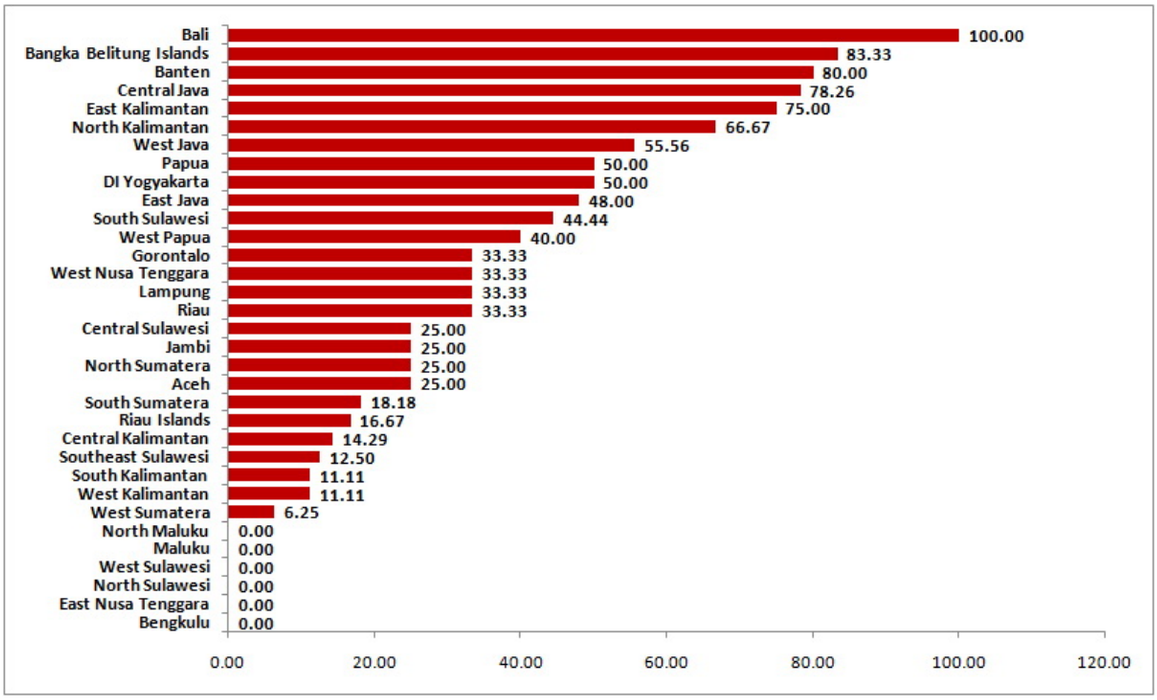
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

Total specialists in hospitals in Indonesia in 2015 amounted to 48,651 people, comprising 21,041 basic medical specialists (43.25%), 8,201 supporting medical specialists (16.86%), 18,363 other medical specialists (37.74 %), and 1,046 dental specialists (2.15%). By specialization, the largest number of specialists belonged to pediatrician, amounting to 6,161 people (12.66%). The provinces with the highest number of specialists were West Java (7,474 people) and East Java (6,240 people), while the provinces with the lowest number were North Kalimantan (59 people), West

Sulawesi (79 people), and North Maluku (83 people). Full details on the number of medical specialists and dental specialists in hospitals can be found in Annex 3.6.

To improve the availability and quality of health human resources in compliance with the standards of healthcare, the Ministry of Health has established the indicators of the 2015-2019 Strategic Plan of the Ministry of Health, which includes the percentage of the class C hospitals of the districts/municipalities employing four basic medical specialists and three supporting medical specialists. The four basic medical specialists in question are obstetricians and gynecologists, pediatricians, internists, and surgeons, while the three supporting medical specialists are radiologists, anesthesiologists and clinical pathologists.

FIGURE 3.15
PERCENTAGE OF CLASS C HOSPITALS OF THE DISTRICTS/MUNICIPALITIES HAVING FOUR BASIC MEDICAL SPECIALISTS AND THREE SUPPORTING MEDICAL SPECIALISTSBY PROVINCE, 2015



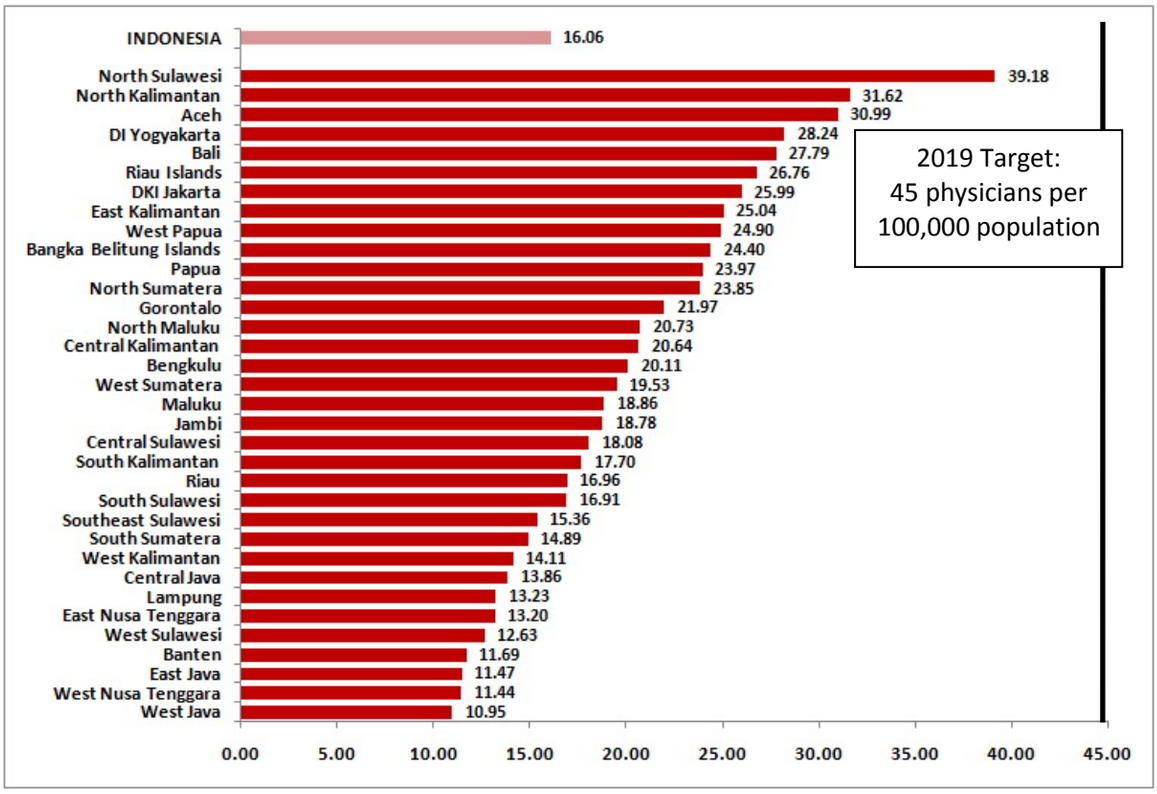
Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id)

In 2015, there were 35.14% of all hospitals (class C hospitals of the districts/municipalities in Indonesia which provided the data) that were already employing four basic medical specialists and three supporting medical specialists. The target of the 2015 Strategic Plan of the Ministry of Health, which was set at 30%, has then been achieved. The province with the highest percentage of class C hospitals of its districts/municipalities employing four basic medical specialists and three supporting medical specialists was Bali (100%). The provinces with class C hospitals of their districts/municipalities that have not employed four basic medical specialists and three supporting medical specialists were Bengkulu, East Nusa Tenggara, North Sulawesi, West Sulawesi, Maluku and North Maluku. DKI Jakarta did not provide the required data. Full details on class C hospitals of the districts/municipalities employing four basic medical specialists and three supporting medical specialists can be found in Annex 3.7.

B. RATIO OF HEALTH PERSONNEL

The ratio of health personnel to population is an indicator to measure the availability of health personnel to achieve specific targets of health development. Based on the Decree of the Coordinating Minister for People's Welfare Number 54 Year 2013 regarding the Development Plan for Health Personnel in 2011-2025, the target ratios of health personnel to population in 2019 are, among others, as follows: 45 general practitioners per 100,000 population, 13 dentists per 100,000 population, 180 nurses per 100,000 population, and 120 midwives per 100,000 population.

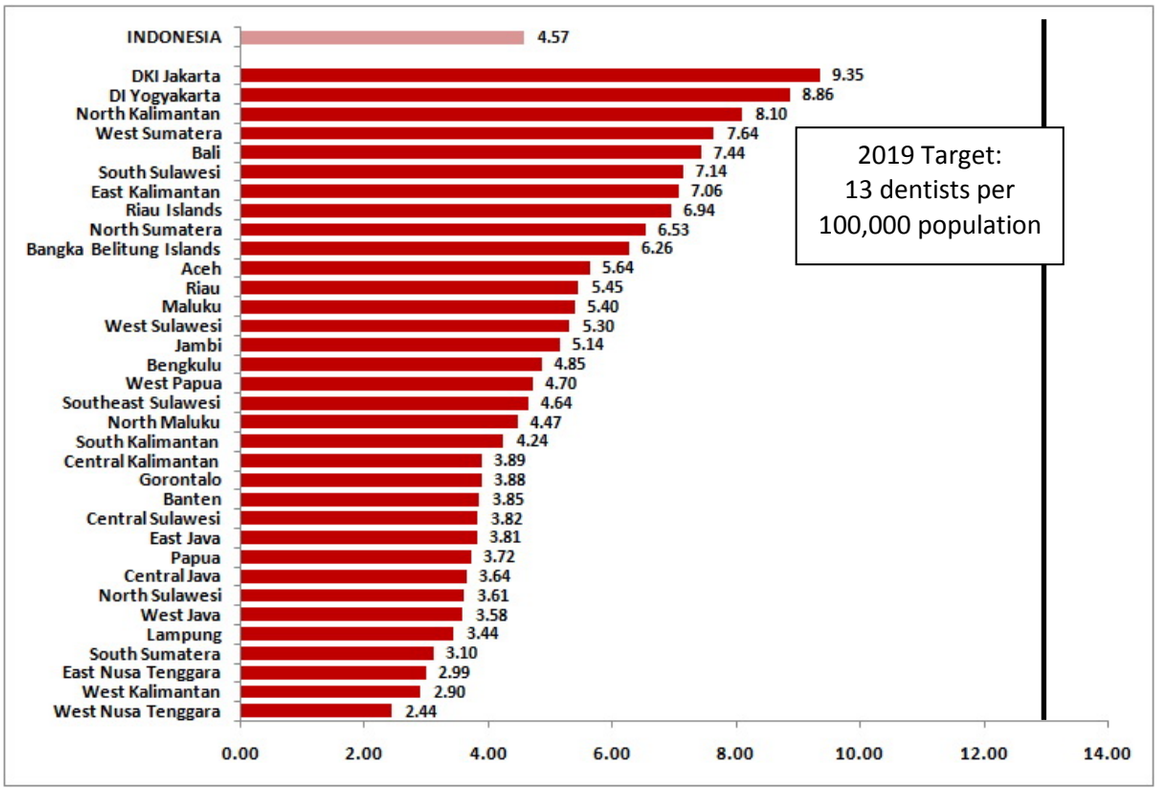
FIGURE 3.16
RATIO OF PHYSICIANS TO 100,000 POPULATION IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

In Figure 3.16, we can see that the ratio of physicians to 100,000 population, both on national and provincial scales, is still far from the target ratio of doctors in 2019, which was set at 45 per 100,000 population. On national scale, the ratio of physicians in Indonesia was 16.06 per 100,000 population. This figure has yet to reach the 2014 target, which was set at 40 per 100,000 population. The province with the highest ratio was North Sulawesi (39.18 per 100,000 population) and the province with the lowest ratio was West Java (10.95 per 100,000 population).

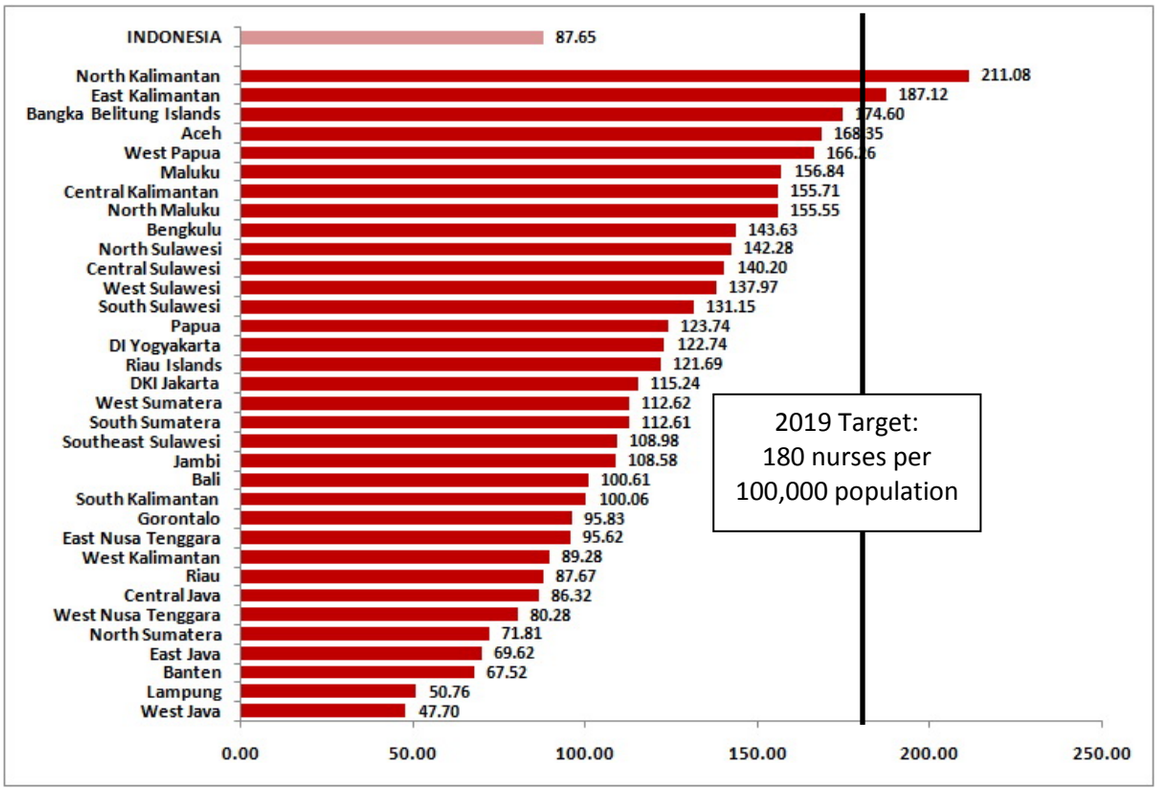
FIGURE 3.17
RATIO OF DENTISTS TO 100,000 POPULATION IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

The ratio of dentists in Indonesia was 4.57 per 100,000 population. This figure is still far from the 2019 target ratio of dentists, which was set to 13 per 100,000 population. Even when compared with the 2014 target (12 per 100,000 inhabitants), the figure is still far from achievement. The province with the highest ratio was Jakarta at 9.35 per 100,000 population and the province with the lowest ratio was West Nusa Tenggara at 2.44 per 100,000 population.

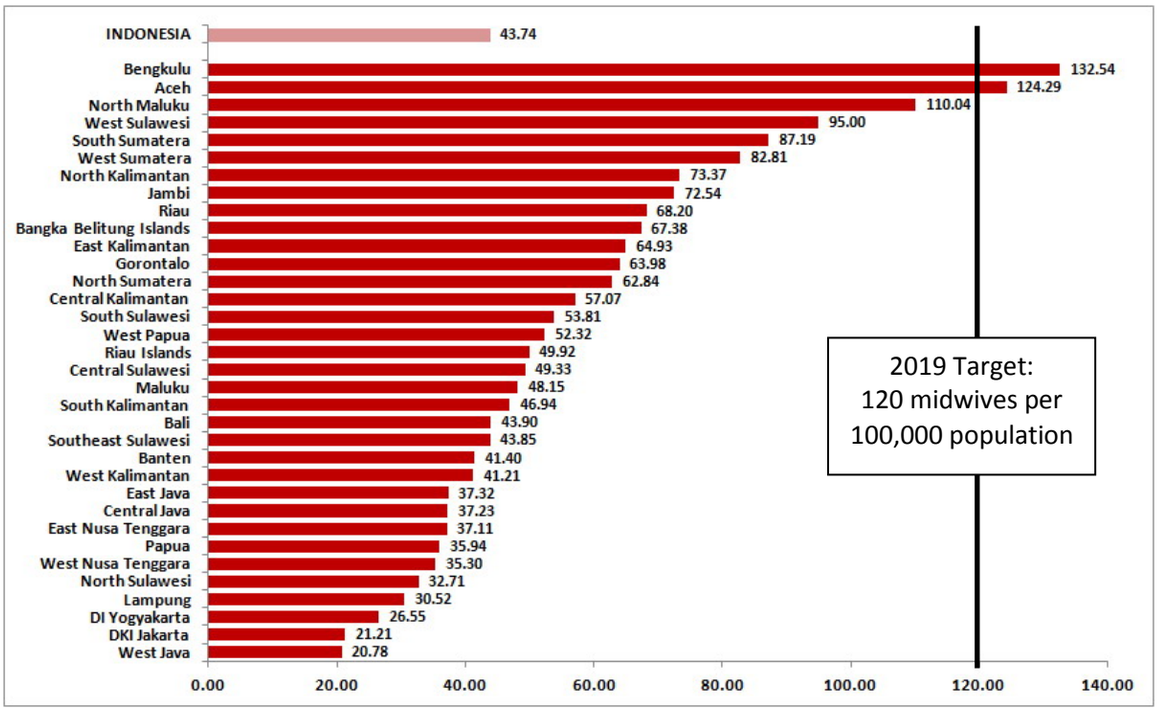
FIGURE 3.18
RATIO OF NURSES TO 100,000 POPULATION IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

On national scale, the ratio of nurses in Indonesia was 87.65 per 100,000 population. It is still far from the 2019 target ratio of nurses, which was set to 180 per 100,000 population. Even when compared with the 2014 target (158 per 100,000 population), the figure is still far from achievement. However, there were two provinces with the ratio of nurses which have already met the 2019 target, namely North Kalimantan (211.08 per 100,000 population) and East Kalimantan (187.12 per 100,000 population). The province with the lowest ratio of nurses was West Java at 47.70 per 100,000 population.

FIGURE 3.19
RATIO OF MIDWIVES TO 100,000 POPULATION IN INDONESIA, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016 (http://bppsdmk.kemkes.go.id) and prepared by Center for Data and Information

The ratio of midwives in Indonesia in 2015 was 43.74 per 100,000 population. This figure is still far from the 2019 target ratio of midwives, which was set to 120 per 100,000 population, and even from the previous year's target ratio which was set to 100 per 100,000 population. There were two provinces that have met the 2019 target, namely Bengkulu (132.54 per 100,000 population) and Aceh (124.29 per 100,000 population). The province with the lowest ratio was West Java at 20.78 per 100,000 population.

C. REGISTRATION OF HEALTH PERSONNEL

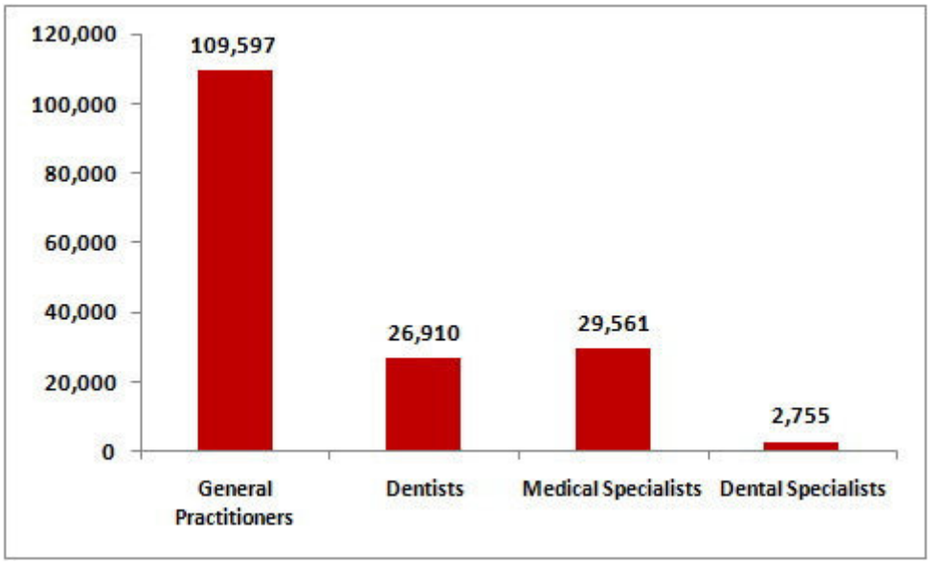
Law Number 36 Year 2014 on Health Personnel Article 44 states that all practicing health workers are required to be in possession of a Certificate of Registration (*STR* or *Surat Tanda Registrasi*). *STR* is valid for five years and can be renewed. The certificate is granted by the council of respective health professions after the health worker in question has met the requirements.

Registration of medical professionals is managed by the Indonesia Medical Council (*KKI* or *Konsil Kedokteran Indonesia*). Registration of physicians and dentists are

regulated in Regulation of Indonesia Medical Council Number 6 Year 2011 regarding Registration of Physicians and Dentists. The registration is intended to provide protection and legal certainty to the public, physicians, and dentists. By requiring registration, *KKI* has the official record of physicians and dentists who are in possession of a certificate of competence and other qualifications.

The Regulation of Indonesia Medical Council Number 21 Year 2014 regarding Registration of Participating Physicians and Dentists of Medical Specialist Education Program and Dental Specialist Education Program Article 2 states that each participating physician and dentist of Medical Specialist Education Program (*PPDS* or *Program Pendidikan Dokter Spesialis*) and Dental Specialist Education Program (*PPDGS* or *Program Pendidikan Dokter Gigi Spesialis*) is required be in possession of a Certificate of Registration of respective *PPDS/PPDGS. PPDS/PPDGS* is the continuance professional education programs for physicians and dentists with independent yet supervised learning methods as a requirement to become a medical specialist and a dental specialist.

FIGURE 3.20
NUMBER OF GENERAL PRACTITIONERS, DENTISTS, MEDICAL SPECIALISTS, AND DENTAL SPECIALISTS WITH CERTIFICATES OF REGISTRATION BY 31 DECEMBER 2015



Source: Indonesia Medical Council Secretariat, 2016

Note:

- Data of general practitioners and dentists are the cumulative data from the beginning year of data collection for *STR* (2006)
- Data of medical specialists and dental specialists are the data of those that have renewed their certificates for the last five years

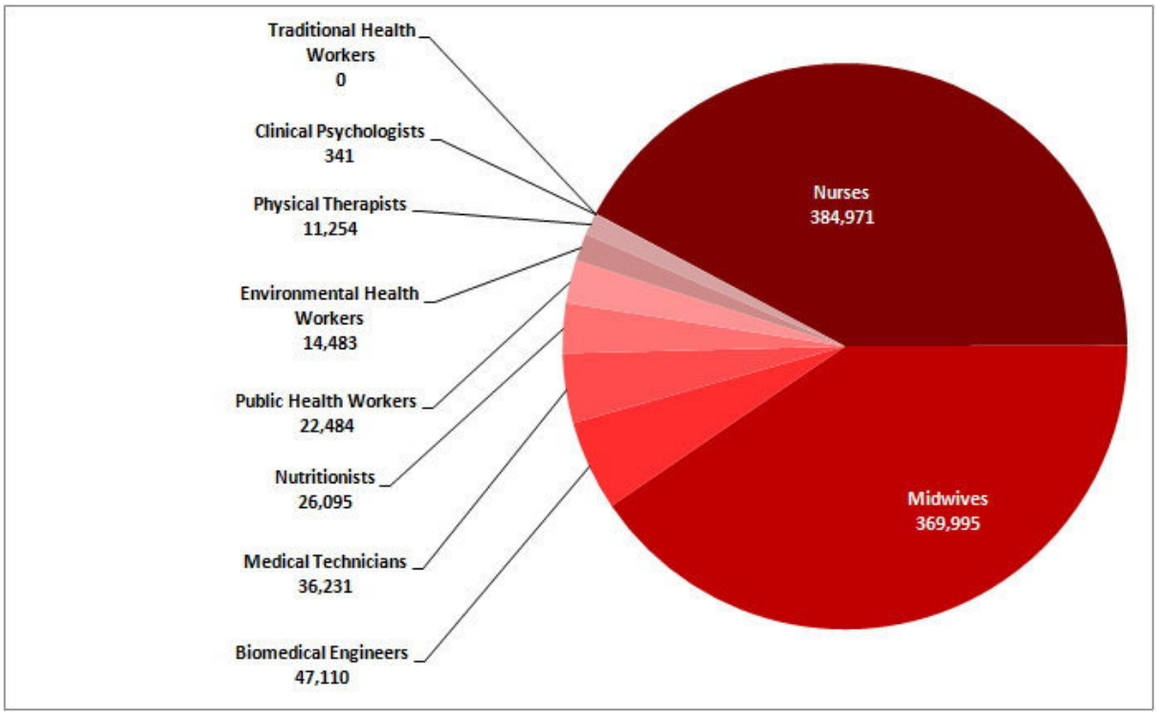
The number of medical professionals who are in possession of *STR* per December 31st, 2015 amounted to 168,823 people, comprising 109,597 general practitioners, 26,910 dentists, 29,561 medical specialists and 2,755 dental specialists. Although as many as 109,597 general practitioners have *STR*, not all of them work in accordance with their intended purposes in medical services. This is one of the causes of uneven distribution of physicians and of shortage of physicians in healthcare facilities in several provinces. Full details regarding the number of general practitioners, dentists, medical specialists, and dental specialists who are in possession of *STR* can be found in Annex 3.8.

According to the Regulation of the Minister of Health Number 889 Year 2011 regarding Registration, Practice License and Work License for Pharmaceutical Professionals, pharmaceutical professionals refers to workers practicing in pharmacy, consisting of pharmacists and pharmaceutical technical assistant. Pharmacists are pharmaceutical graduates who are qualified as pharmacists and have taken the oath of a pharmacist. Pharmaceutical technical assistants are workers who assist the pharmacist in practicing the assistants may be pharmacy undergraduates, pharmacy associates, pharmaceutical analysts and intermediate pharmacist/assistant pharmacist.

Article 2 from the same Regulation states that every pharmaceutical professional practicing in pharmacy is required to have *STR*. The *STR* for pharmaceutical professionals is in the form of Certificate of Pharmacist Registration (*STRA* or *Surat Tanda Registrasi Apoteker*) for pharmacists and Certificate of Pharmaceutical Technical Assistant (*STRTTK* or *Surat Tanda Registrasi Tenaga Teknis Kefarmasian*) for pharmaceutical technical assistants. Both *STRA* and *STRTTK* are issued by the Minister of Health and the administration is delegated to the National Pharmaceutical Committee (*KFN* or *Komite Farmasi Nasional*) for *STRA* and to the Head of Provincial Health Office for *STRTTK*.

The *STR* for other than medical professional and pharmaceutical professional is managed by the Indonesian Health Personnel Assembly (*MTKI* or *Majelis Tenaga Kesehatan Indonesia*) in accordance with the Regulation of the Minister of Health Number 46 Year 2013 regarding Registration of Health Personnel. Until 2015, as many as 912,964 were in possession of an *STR*; the highest number is nurses with 384,971 people (42.17%) and midwives with 369,995 people (40.53%). Full details regarding the number of health personnel in possession of an *STR* can be found in Annexes 3.9 and 3.10.

FIGURE 3.21
NUMBER OF HEALTH PERSONNEL IN POSSESSION OF CERTIFICATES OF REGISTRATION BY GROUP PER 2015



Source: Indonesian Health Personnel Assembly, Ministry of Health RI, 2016

In addition to the health personnel discussed above, the Regulation of the Minister of Health Number 46 Year 2013 regarding Registration of Health Personnel Article 8 states that foreign health personnel or Indonesian health personnel who are overseas graduates may practice their profession or vocation in Indonesia only after coming into possession of a certificate of competence or producing a recognition of the competence from the institution they graduated from and having it validated by the competent authority of the country of origin. These health personnel should follow the evaluation of the competence and earn the *STR* in accordance with the prevailing regulations.

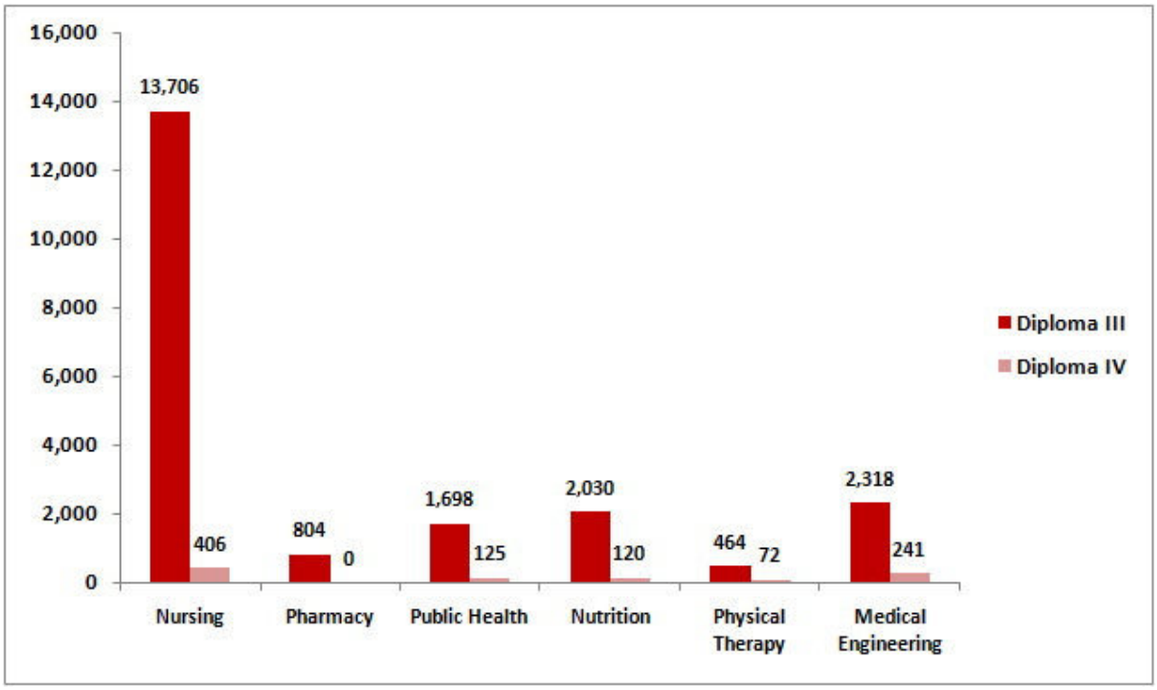
D. NUMBER OF GRADUATES OF POLYTECHNICS OF HEALTH

According to Law Number 36 Year 2014 on Health Personnel Article 9, health personnel must have a minimum qualification of Diploma III except medical professionals. Further on Article 17 it is explained that the provision of health personnel is conducted through higher education in health. Higher education in health aims to produce qualified health personnel, in accordance with professional standards and service standards of the profession. The organization of higher education in health should focus on the balance between the need for the health efforts and the dynamics of

employment opportunities both at home and abroad, the balance between production capability of health personnel and resources available, and the development of science and technology.

The higher education in health organized by the Ministry of Health refers to the Polytechnics of Health (*Poltekkes* or *Politeknik Kesehatan*), which is a Technical Implementation Unit of the Ministry of Health under National Board of Health Human Resources Development and Empowerment (*BPPSDMK* or *Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan*). In Indonesia, there are 38 polytechnics of health spread in 33 provinces. Total programs offered consist of 18 courses of Diploma III and 14 courses of Diploma IV.

FIGURE 3.22
NUMBER OF GRADUATES OF DIPLOMA III AND DIPLOMA IV OF POLYTECHNICS OF HEALTH BY TYPE OF HEALTH PERSONNEL, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

In 2015, the total number of polytechnics of health graduates is 21,984 people, consisting of 21,020 from Diploma III and 964 from Diploma IV. The highest number of graduates comes from nursing courses with 14,112 people (64.29%) comprising 13,706 from Diploma III and 406 from Diploma IV. The lowest number comes from physical therapy (with 464 graduates from Diploma III) and pharmacy (with zero graduate from Diploma IV). Full details regarding the number of graduates of Diploma III and Diploma IV of polytechnics of health can be seen Annexes 3.17 and 3.18. In addition to polytechnics of health graduates managed by the Ministry of Health, the needs for health workers are

also provided by private colleges of health sciences. The data is not included to be presented in this profile.

E. EMPLOYING HEALTH PERSONNEL

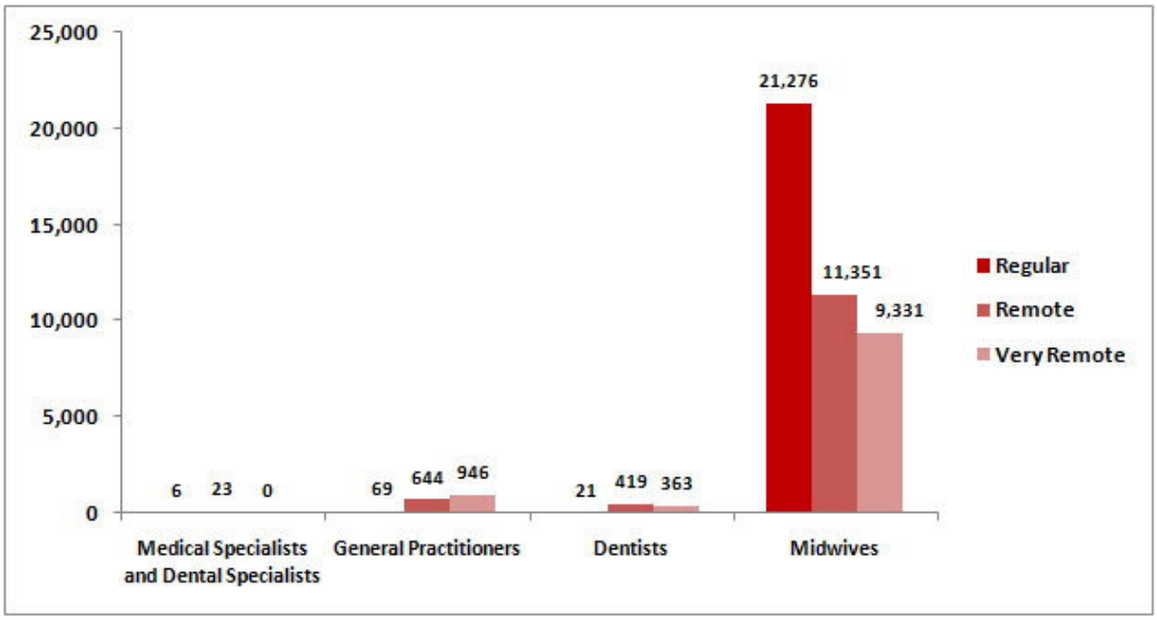
1. Health Personnel as Non-Permanent Employees

According to the Regulation of the Minister of Health Number 7 Year 2013 regarding Guidelines for Promotion of Physicians and Midwives as Non-Permanent Employees, a Non-Permanent Employee (*PTT* or *Pegawai Tidak Tetap*) refers to one who is promoted for a certain period in order to carry out the task of governance and development which are technical operations and administration in accordance with the needs and abilities of the organization that s/he is assigned to. The promotion and placement of Physicians and Midwives as *PTT* can be implemented by either the central government or local governments. At the central government level it is implemented by Head of Bureau of Personnel of the Ministry of Health, while at the local government level it is implemented by the governor and regent/mayor.

PTT physicians in this case refers to physicians, dentists, medical specialists, and dental specialists. The purpose of granting them *PTT* status is to meet healthcare needs: in healthcare facilities located in underdeveloped regions, borders, regions with health problems, conflict-prone regions; in provincial hospitals as physicians for disaster preparedness brigade; and in health offices of ports in remote and very remote regions. The PTT assignment period is one year for medical specialists and dental specialists who are assigned to healthcare facilities under the criteria of remote and very remote; two years for physicians or dentists who are assigned to healthcare facilities under the criteria of remote and very remote; and three years for physicians, dentists, medical specialists and dental specialists who are assigned to healthcare facilities under the criteria of regular.

PTT midwives are assigned as midwives in the villages under the criteria of regular, remote or very remote. They are assigned for three years and the assignment may be renewed twice at most.

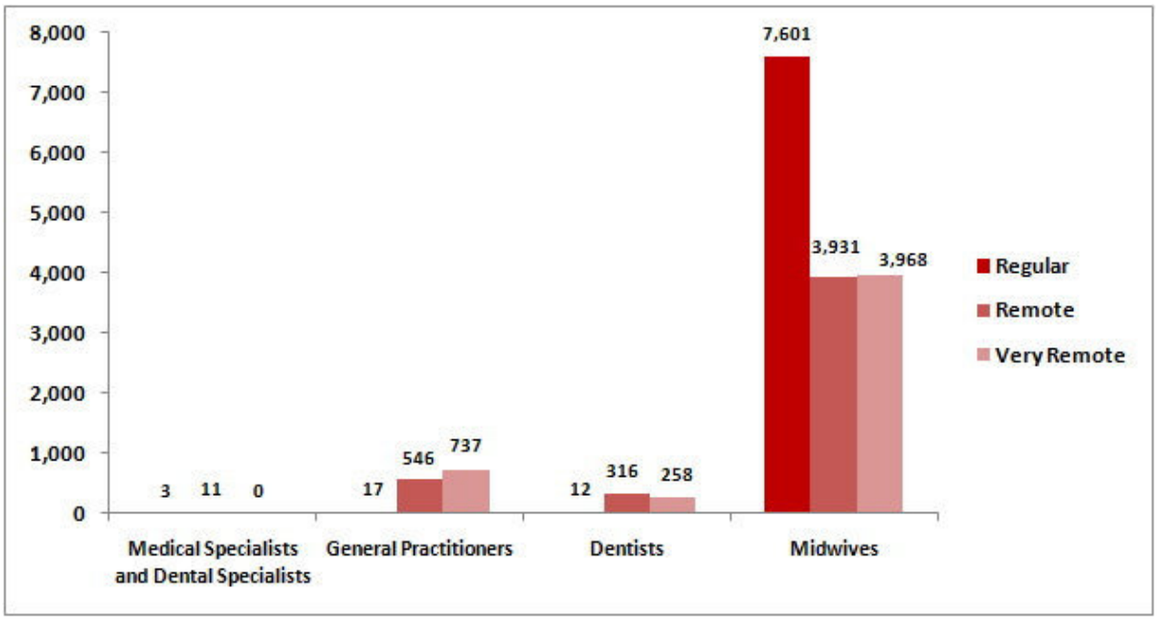
FIGURE 3.23
NUMBER OF MEDICAL SPECIALISTS, DENTAL SPECIALISTS, GENERAL PRACTITIONERS, DENTISTS AND MIDWIVES AS NON-PERMANENT EMPLOYEES BY CRITERIA OF REGION IN INDONESIA PER 31 DECEMBER 2015



Source: Personnel Bureau, Ministry of Health RI, 2016

Total health personnel with the *PTT* status in 2015 was as many as 29 medical specialists and dental specialists, 1,659 physicians, 803 dentists, and 41,958 midwives. The *PTT* medical specialists and dental specialists were assigned to regular and remote regions. The *PTT* general practitioners and dentists were assigned more to remote and very remote regions. The majority of the *PTT* midwives, on the other hand, were assigned to regions under the criteria of regular.

FIGURE 3.24
NUMBER OF MEDICAL SPECIALISTS, DENTAL SPECIALISTS, GENERAL PRACTITIONERS, DENTISTS, AND MIDWIVES PROMOTED AND ACTIVE AS NON-PERMANENT EMPLOYEES IN INDONESIA BY CRITERIA OF REGION, 2015



Source: Personnel Bureau, Ministry of Health RI, 2016

In 2015, as many as 17,400 health professionals were promoted as non-permanent employees, comprising 14 medical specialists and dental specialists, 1,300 physicians, 586 dentists and 15,500 midwives. Full details regarding the number of health professionals who were promoted and active as *PTT* in 2015 can be seen in Annexes 3.11, 3.12, 3.13, and 3.14.

2. Health Personnel with Special Assignment

a. Special Assignments to Residents

The Regulation of the Minister of Health Number 9 Year 2013 regarding Special Assignment to Health Personnel elucidates that specific assignment refers to special employment assigned specifically to health personnel within a certain period in order to improve access and quality of health services in healthcare facilities in underdeveloped regions, borders and outlying islands (*DTPK* or *Daerah Tertinggal, Perbatasan, dan Kepulauan*), regions with health problems (*DBK* or *Daerah Bermasalah Kesehatan*), as well as in class C and class D hospitals in the districts which need medical care from specialists. The health personnel employed with these special assignments are residents and health professionals with Diploma III education.

Resident refers to a physician/dentist who is currently receiving training to become a medical specialist/dental specialist. The residents who are given the special

assignment are senior residents and junior residents. Senior residents are assigned between three to six months. Junior residents are assigned for six months.

Based on the data from the Personnel Bureau of the Ministry of Health, the number of active residents tasked with special assignment in priority districts of *DTPK* and *DBK* in Indonesia in 2015 was as many as 246 people. The provinces with the highest number of active residents were Riau and Southeast Sulawesi with as many as 17 people, while the provinces with no residents given special assignment to were Jakarta, Yogyakarta, Bali, and West Sulawesi.

In 2015, 748 residents were tasked with special assignment. The province with the highest number of residents recruited and assigned to was North Sumatra with 61 people. The provinces with no residents recruited and assigned with special assignments to were Jakarta, Yogyakarta and Bali. Full details regarding the number of active residents recruited and assigned to priority districts of *DTPK* and *DBK* can be seen in Annex 3.15.

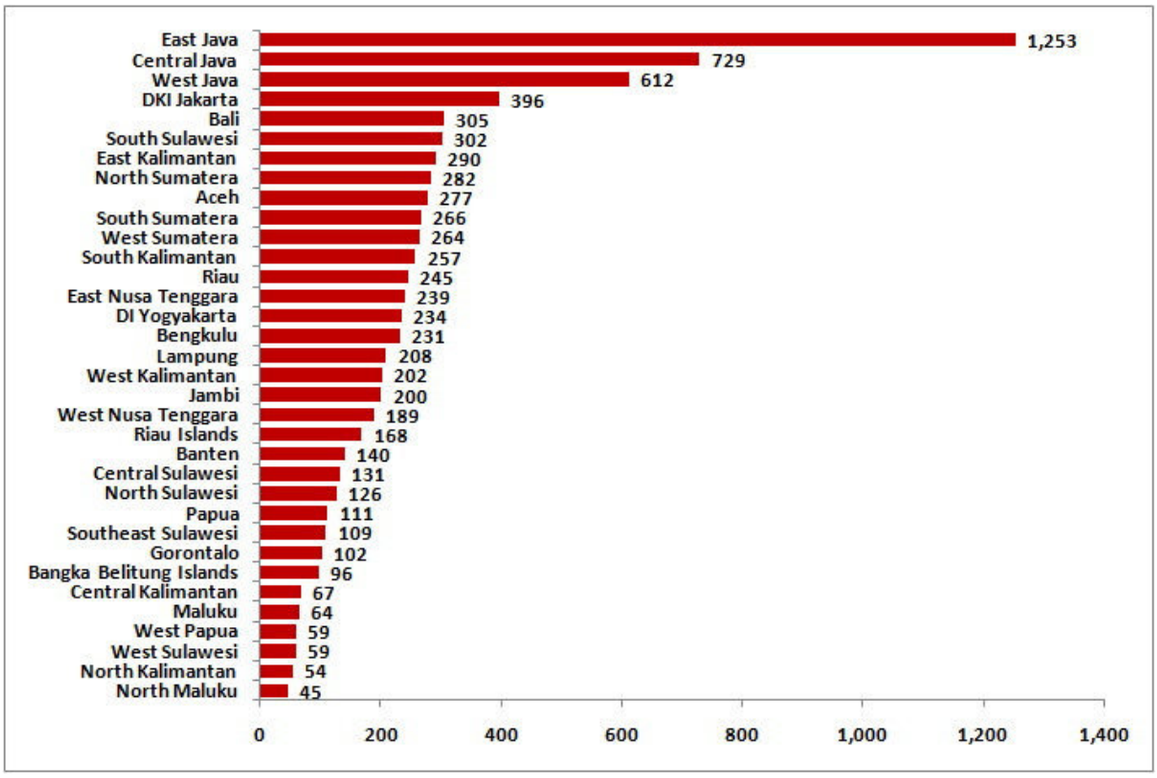
b. Special Assignments to Interns

The Regulation of the Minister of Health Number 299 Year 2010 regarding the Implementation of Internship and Post-Internship Physician Assignment Programs elucidates that internship is a process of quality assurance of the medical professions to apply the competencies acquired during their education in an integrated, comprehensive, and independent manner, which uses family medicine approach, in order to improve the expertise and to conform what they have attained during training with what they actually experience during practice in reality. The placement of physicians for their internship program in healthcare facilities needs to be synergized with government programs to ensure equal distribution of health services.

Interns refers to fresh graduates who have just finished their competency-based medical education who will start practicing and/or who will start their training as specialists. To start internship, interns must have Certificate of Registration issued by Indonesia Medical Council and Internship Medical License issued by the Head of Regency/Municipality Health Office. The Certificate of Registration and the Internship Medical License are valid only while they are undergoing internship.

There are two types of internship programs: a bond internship and independent internship. Bond interns are assigned for a year and are required to carry out post-internship tasks in the healthcare facilities designated by the Minister of Health.

FIGURE 3.25
NUMBER OF INTERNS, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

The interns leave for their assigned regions in four departures in one year. In 2015, a number of interns were dispatched: 2,286 physicians in February; 2,158 physicians in May; 378 physicians in October; and 3,490 physicians in November. The province with the highest number of interns was East Java (1,253 physicians) and the province with the lowest number of interns was North Maluku (45 physicians). Full details regarding the number of interns in 2015 can be found in Annex 3.19.

c. Team-Based Special Assignments to Health Personnel

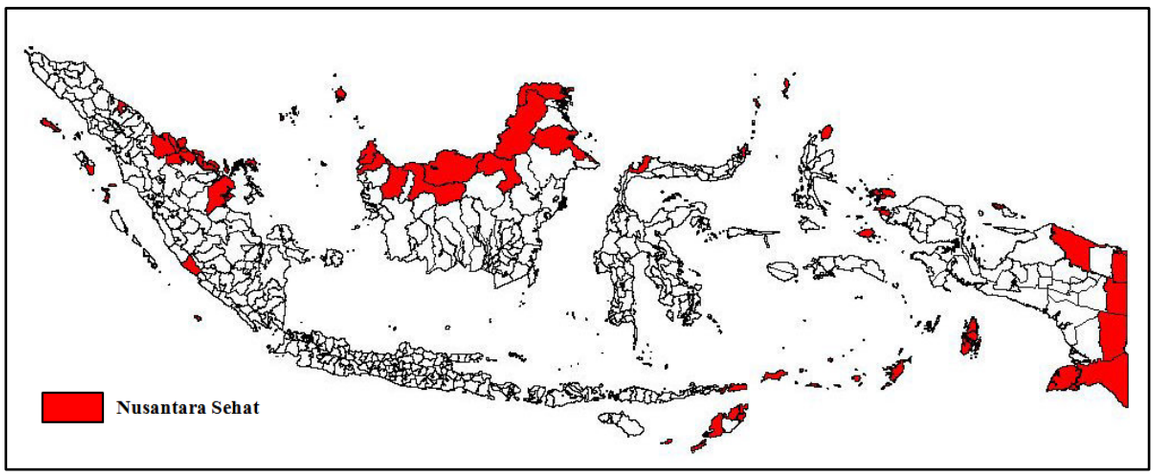
The special assignment recently launched in 2015 is team-based special assignments to health personnel. Based on the Regulation of the Minister of Health Number 23 Year 2015 regarding Team-Based Special Assignments to Health Personnel in Order to Support Healthy Archipelago Program, the special assignments are meant to specifically employ health personnel in teams in a certain period of time in a certain number and types in a team in order to improve access and quality of health services in healthcare facilities in underdeveloped regions, borders, and outlying islands, and regions with health problems.

The purposes of the special assignments are as follows:

1. Providing healthcare to remote areas;
2. Maintaining the continuity of healthcare;
3. Addressing health issues in accordance with local needs;
4. Improving retention of health personnel on duty;
5. Mobilizing community empowerment;
6. Providing integrated services;
7. Improving the services as well as the distribution.

The health personnel on a team-based special assignment in supporting the Healthy Archipelago (*Nusantara Sehat*) program shall at minimum consist of five types of health personnel, namely physicians, nurses, midwives, and two other health professionals (either dentists, nutritionists, environmental health workers, medical technologists, pharmaceutical professionals, or public health workers). The assignment shall be in a two-year period. The teams will be assigned to health centers, especially those located in *DTPK* and/or *DBK* regions under the criteria of very remote. Local governments can empower these health professionals after finishing their special assignments based on competence, workforce standards, and the needs of the region in order to achieve the independent health personnel provision in accordance with the applicable laws.

FIGURE3.26
DISTRICTS/MUNICIPALITIES ASSIGNED FOR HEALTHY ARCHIPELAGO PROGRAM, 2015

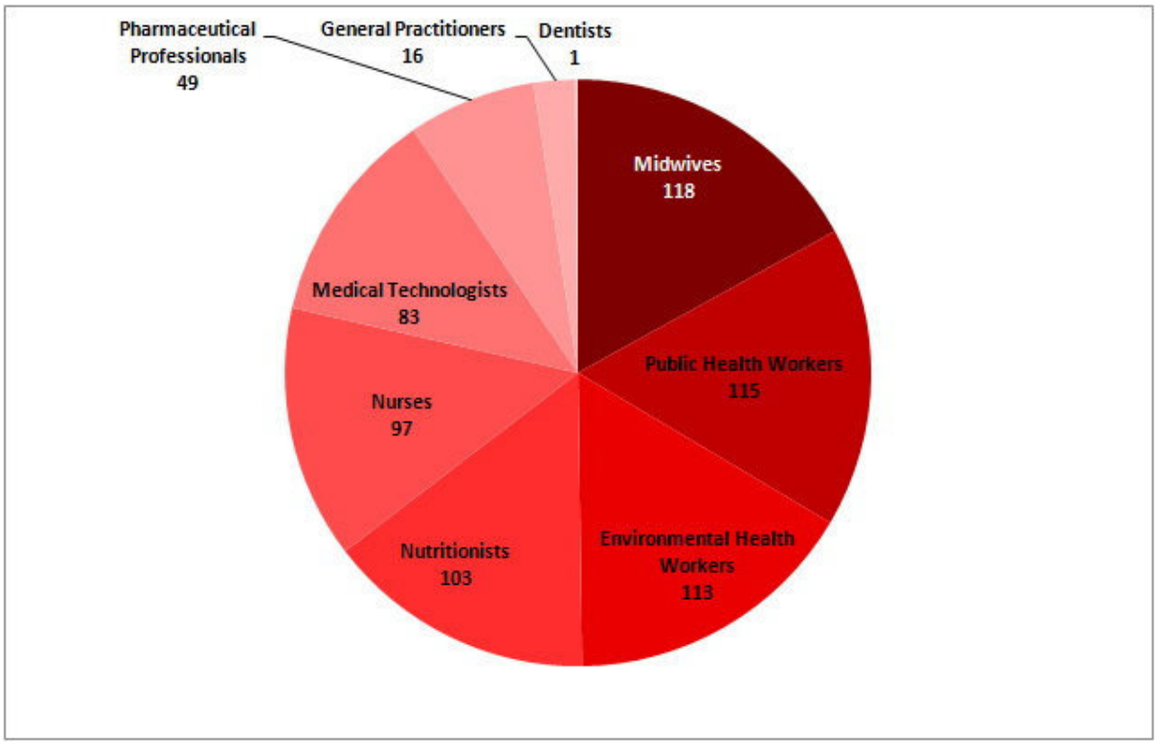


Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

In 2015, team-based special assignments have been carried out in two times of departure. The first team was dispatched in May 2015, sending 142 health workers who passed the selection and assigning them to 19 districts with total 20 health centers to be stationed in. The second team was dispatched in December 2015, assigning 553 health

workers to 46 districts with total 100 health centers to be stationed in. Full details regarding the regions assigned for Healthy Archipelago program can be seen in Annexes 3.20 and 3.21.

FIGURE 3.27
NUMBER OF HEALTH WORKERS ASSIGNED TO HEALTHY ARCHIPELAGO PROGRAM
2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

The highest number of health workers assigned were midwives (16.98%), public health workers (16.55%), and environmental health workers (16.26%). The province with the highest number of team-based special assignments health workers assigned was East Nusa Tenggara with 162 people assigned to 8 districts in 28 health centers. The province with the lowest number of team-based special assignments health workers assigned was Central Sulawesi with 5 people assigned to one district in a health center. Full details regarding the number of health workers assigned in Healthy Archipelago teams can be seen in Annex 3.22.

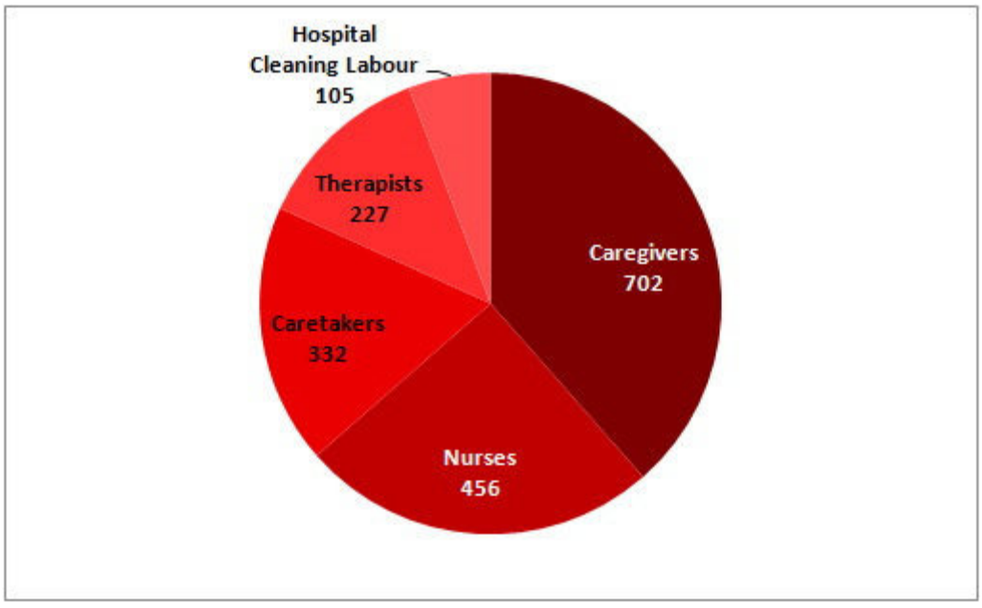
3. Indonesian Health Migrant Workers

Based on the Regulation of the Minister of Health Number 37 Year 2015 regarding the Deployment of Health Workers Overseas, Indonesian Health Migrant Workers (*TKKI* or *Tenaga Kerja Kesehatan Indonesia*) refers to all Indonesian health

workers who carry out health efforts either directly or indirectly to be employed abroad, the efforts of which include the transfer of knowledge and technology, within a certain period. The deployment of Indonesian health workers overseas is implemented by considering the balance between the demand of health workers in Indonesia and the employment opportunities for Indonesian health workers abroad. Destination countries are required to provide a written agreement with the Indonesian government and/or have legislation that protects foreign nationals.

The deployment of health workers overseas is intended to assign *TKKI* to perform social services. *TKKI* refers to Indonesian migrant workers practicing/working in the health field. *TKKI* can be health workers with civil servant status or independent individuals. They should be registered and work in accordance with their competence. They are assigned on the basis of a request from users (government agencies, government legal entities, and private legal entities) in the destination country. The placement is implemented by the National Agency for Placement and Protection of Indonesian Migrant Workers (*BNP2TKI*) after coordination with the Ministry of Health.

FIGURE 3.28
NUMBER OF INDONESIAN HEALTH MIGRANT WORKERS ASSIGNED BY TYPE OF WORK REQUESTED BY USERS, 2015



Source: National Board of Health Human Resources Development and Empowerment, Ministry of Health RI, 2016

Total number of *TKKI* working abroad in 2015 was as many as 1,822 people spread across 24 countries. Most *TKKI* users, 99.6% of them, were in the continent of Asia, the rest is spread across the continent of Africa, America, and the Republic of Palau. A number of countries in Southeast Asia which were *TKKI* users in 2015 were Singapore (177 workers), Malaysia (64 workers), and Brunei Darussalam (9 workers).

But it was Taiwan that employed the most *TKKI* with as many as 625 people with the majority working as a caregiver (433 workers). The types of *TKKI* that were in demand in 2015 were caregivers (male and female) with as much as 38.53%, nurses (nurses, assistant nurses, operation theater nurses, ICU staff nurses, house nurses, and child nurses) with as much as 25.03%, caretakers with as much as 18.22%, therapists (therapists and speech therapists) with as much as 12.46%, and hospital cleaning labor with as much as 5.76%. Full details regarding the number of *TKKI* by country can be found in Annex 3.23.

4. Foreign Health Workers

The Regulation of the Minister of Health Number 67 Year 2013 regarding the Employment of Foreign Health Workers states that foreign health workers (*TK-WNA* or *Tenaga Kesehatan Warga Negara Asing*) refers to foreign nationals who have the knowledge and/or skills attained through education in the health sector that is recognized by the government. The employment of *TK-WNA* can be done as long as there is bilateralism between Indonesia and the country where *TK-WNA* come from. According to Law Number 36 Year 2014 on Health Workers Article 53 Paragraph 2, the employment of *TK-WNA* is implemented by considering the transfer of technology and knowledge as well as the availability of local health workers.

The employment of *TK-WNA* includes the health services, health education and training, social services in health, and health research. The types of *TK-WNA* that can be employed include physicians, dentists, and other health professionals. The *TK-WNA* who will practice in Indonesia should take competency evaluation that is done through reviewing the formal documents and assessing the required skills to practice. To start practicing, a *TK-WNA* must have a temporary certificate of registration and a medical license which are valid for one year and can be renewed only for the next year.

CHAPTER IV

HEALTH FINANCE

Chapter IV
HEALTH FINANCE

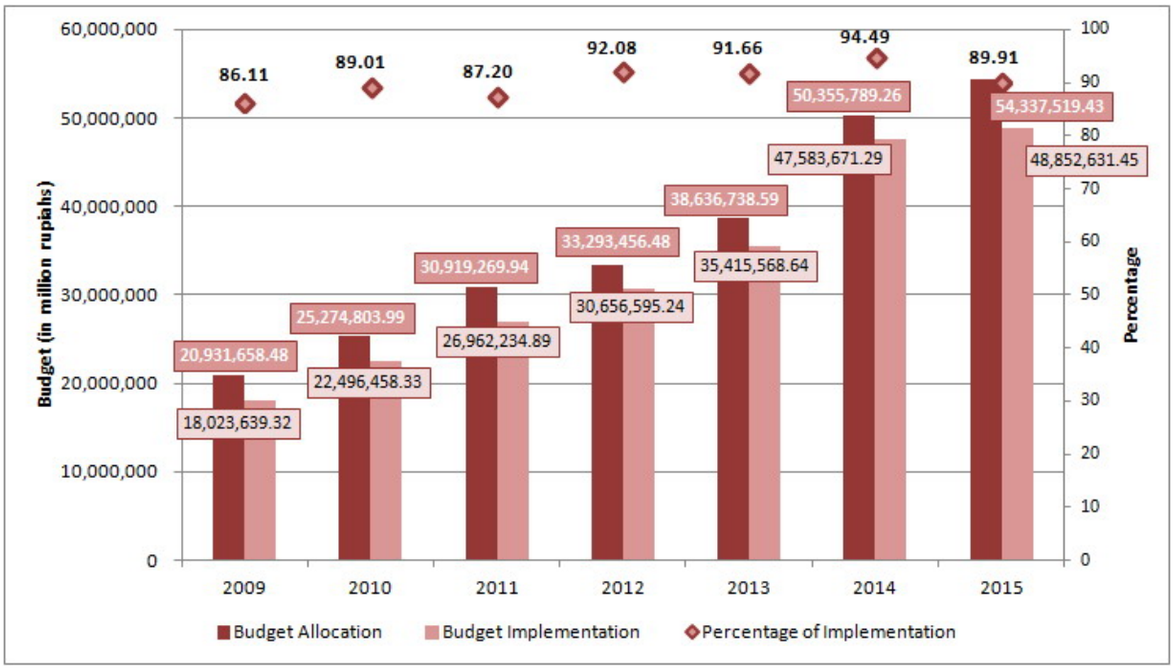
One of the sub-systems of national health is health financing. Health financing refers to the amount of fund which needs to be provided to organize and/or to utilize a variety of health efforts required by individuals, families, groups, and communities. Law Number 36 Year 2009 on Health states that Health Financing is aimed at providing sustainable health financing in sufficient amount, which is allocated and utilized equitably. In general, the healthcare fund can be sourced from the government budget and from the public budget.

In this chapter of Health Financing, we will further discuss on the allocation and implementation of health budget both at central and regional levels. Health budget refers to the healthcare fund sourced from the government budget. The budget covers the health budget in the Ministry of Health, De-Concentration Fund and Co-Administration Fund, and Health Operational Support (*BOK* or *Bantuan Operasional Kesehatan*) fund. It will also further discuss the National Health Insurance (*JKN* or *Jaminan Kesehatan Nasional*).

A. BUDGET OF THE MINISTRY OF HEALTH

The health budget allocation managed by the Ministry of Health in 2015 amounted to 54.3 trillion rupiahs, with 48.9 trillion rupiahs implemented. Both the allocation and the implementation of 2015 budget had an increase compared to that of 2014: 50.4 trillion rupiahs allocated, with 47.6 trillion rupiahs implemented. However, according to the percentage of implementation, the 2015 budget had a decrease compared to that of the previous year, from 94.99% in 2014 to 89.1% in 2015.

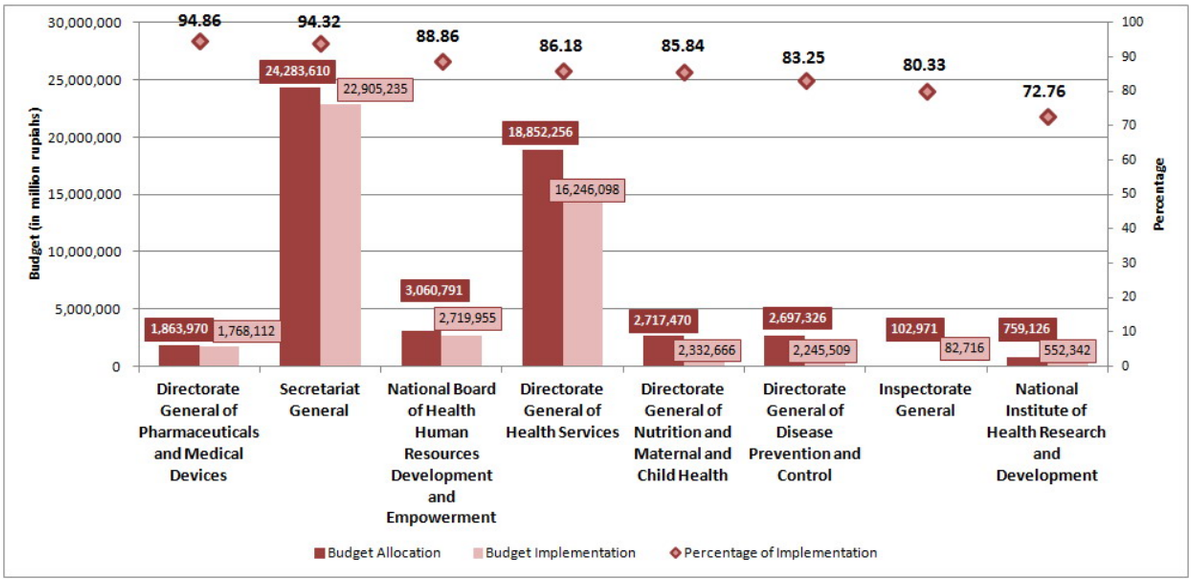
FIGURE 4.1
ALLOCATION AND IMPLEMENTATION OF THE BUDGET OF THE MINISTRY OF HEALTH RI
2009 – 2015



Source: Bureau of Finance and State-Owned Asset, Ministry of Health RI, 2016

Figure 4.1 shows that there has been an upward trend in the budget allocation and implementation of the Ministry of Health in the last seven years. In 2009 the Ministry of Health allocated a budget of 20.93 trillion rupiahs and implemented 18.05 trillion rupiahs out of it, showing an implementation of 86.11%. The figure kept increasing from year to year, and in 2015 as much as 54.3 trillion rupiahs was allocated and as much as 48.9 trillion rupiahs was implemented, showing an implementation of 89.91%.

FIGURE 4.2
ALLOCATION AND IMPLEMENTATION OF THE BUDGET OF THE MINISTRY OF HEALTH RI BY ECHELON I UNIT, 2015

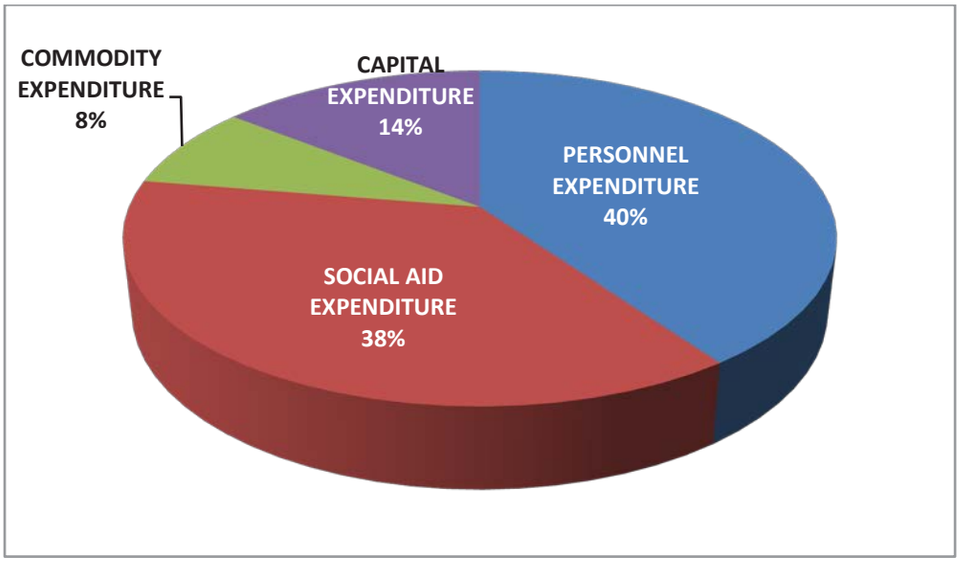


Source: Bureau of Finance and State-Owned Asset, Ministry of Health RI, 2016

The budget distribution of the Ministry of Health RI by Echelon I Unit shows that the Secretariat General had the largest allocation with 24.3 trillion rupiahs, while the Inspectorate General had the smallest with 103 billion rupiahs. Echelon I Unit with the highest percentage of budget implementation is the Directorate General of Pharmaceuticals and Medical Devices (*Direktorat Jenderal Bina Kefarmasian dan Alat Kesehatan*) with an implementation of 94.86%, while National Institute of Health Research and Development (*Badan Penelitian dan Pengembangan Kesehatan*) had the lowest, with an implementation of 72.76%. The data and information on the allocation and implementation of the budget of the Ministry of Health by Echelon I Unit in 2015 can be found in Annex 4.1.

Of all the budget allocation for the Ministry of Health which was 54.3 trillion rupiahs, as much as 20.36 trillion rupiahs, or 38% of the total, was intended as funds for Recipients of Contribution Subsidy (*PBI* or *Penerima Bantuan Iuran*) on National Health Insurance (*JKN* or *Jaminan Kesehatan Nasional*). The funds were realized through the Social Aid (*Bansos* or *Bantuan Sosial*) Expenditure Budget of the Ministry of Health. Besides for those funds, 40% of the budget was allocated for Personnel Expenditure, 14% was for Capital Expenditure, and the remaining 8% was for Commodity Expenditure.

FIGURE 4.3
PERCENTAGE OF THE BUDGET OF THE MINISTRY OF HEALTH RI
BY TYPE OF EXPENDITURE, 2015



Source: Bureau of Finance and State-Owned Asset, Ministry of Health RI, 2016

B. ALLOCATION AND IMPLEMENTATION OF DE-CONCENTRATION FUND AND CO-ADMINISTRATION FUND OF FISCAL YEAR 2015

According to the provisions stipulated in the Government Regulation Number 7 Year 2008 concerning De-Concentration and Co-Administration and the Regulation of the Minister of Finance Number 156/PMK.07/2008 as last amended by Regulation of the Minister of Finance Number 248/PMK.07/2010 in the context of implementing the delegation of authority to heads of local governments (the administration of which is funded by the government) to support the achievement of development which are the national focus/priorities, to increase the role of the provinces in the framework of good governance in supervising the implementation of the programs of ministries/agencies (K/Lor Kementerian/Lembaga) at the local government level, and to ensure the availability of funds for the implementation of the delegation of authority, the government by means of their ministries/agencies therefore regulate the granting of the de-concentration and the co-administration funds.

De-Concentration Funds refers to funds from the National Budget assigned to governors as the government representatives, which includes all revenues and expenditures, for the purpose of executing de-concentration efforts, excluding the funds allocated for Central Government agencies in the region. The principle of de-concentration funding is to fund the implementation of the duties and authority of governors as the government representatives in the region: the nature of the activities funded is non-physical such as synchronization and coordination of planning, facilitation,

technical assistance, training, counseling, supervision, research and surveys, guidance, supervision and control. The budgeting process of de-concentration fund has to go through several stages/mechanisms, including setting the ceiling of de-concentration funds to each local government (in this case the provincial health offices) performed by units (*satker* or *satuan kerja*) at the central level assigned to supervise the programs, submitting activity proposals by the provincial health offices with reference to the predetermined de-concentration menu, and reviewing the proposed activities carried out by several central units concerned. The de-concentration fund of the Ministry of Health may only be allocated to provincial health offices, which will then be managed to finance non-physical activities which might involve district/municipality health offices. More detailed data and information on the allocation and implementation of the de-concentration fund in 2015 are presented in Annex 4.4.

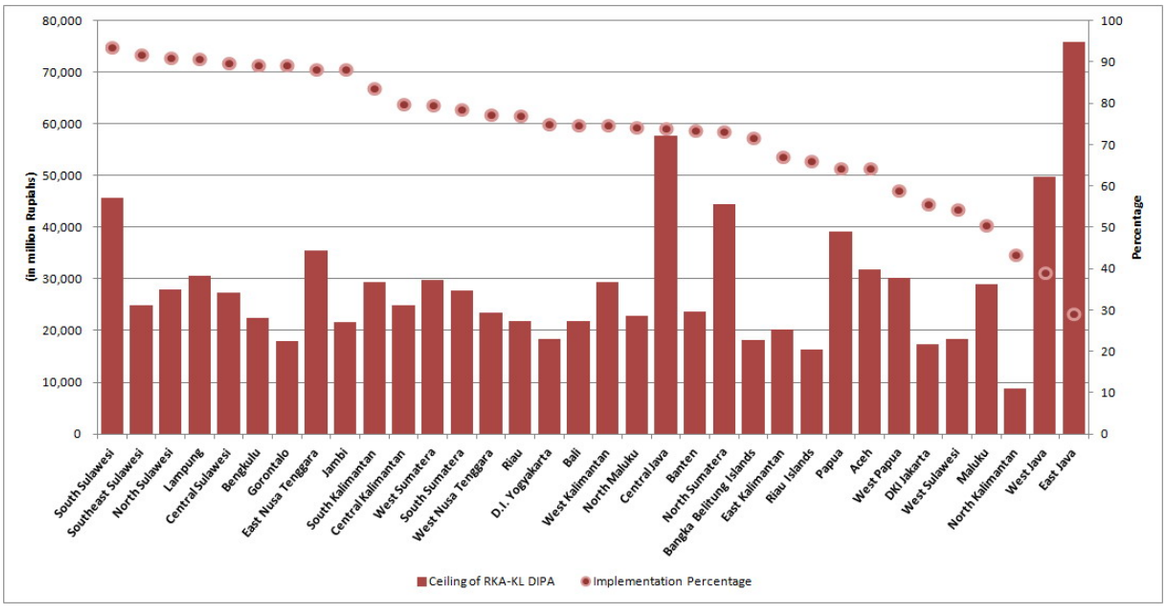
Co-Administration (*TP* or *Tugas Pembantuan*) is an assignment from the central government to the regions and/or villages or other terms of local administration with the obligation to report and be accountable for the implementation to the commissioning entity. Co-Administration Fund refers to funds from the National Budget assigned to the regions and villages, which includes all revenues and expenditures, for the purpose of executing the co-administration efforts. The Co-Administration Fund of the Ministry of Health may be allocated to the district/municipality health offices. The Fund may be allocated to physical activities, such as activities which produce output that adds fixed assets such as land acquisition, buildings, equipment and machinery, roads, irrigation and network, procurement of consumables such as drugs and vaccines, procurement of seeds and fertilizer, or the like.

In 2015, the Ministry of Health was allocated 54,337,519,430,000 rupiahs for the health budget. From the budget, as much as 1.81% or 983,955,658,000 rupiahs was allocated for de-concentration fund that was distributed to 34 provincial health offices throughout Indonesia in support of six programs. The six programs in question are: (1) Management and Other Technical Tasks Implementation Support Program of the Ministry of Health, (2) Nutrition and Maternal and Child Health Program, (3) Health Efforts Program, (4) Disease Control and Environmental Health Program, (5) Pharmaceuticals and Medical Devices Program, and (6) Health Human Resources Development and Empowerment Program. The de-concentration funds were allocated to achieve the program goals that can be used in the context of synergism and coordination for the sustainability of the programs between the central level and regional level with regard to the predetermined compulsory and optional menus.

As for the budget ceiling of Co-Administration (*TP*) in 2015, the Ministry of Health allocated 8.44% or 4,588,306,686,000 rupiahs distributed to various areas in support of three programs, namely: (1) Nutrition and Maternal and Child Health Program, (2) Health Efforts Program, and (3) Disease Control and Environmental Health Program. The allocation of de-concentration fund in the Ministry of Health was then distributed to all provincial health offices in Indonesia.

The ceiling and implementation of health de-concentration fund by province in 2015 is presented in Figure 4.4. Based on the graph, we can see that the implementation of the de-concentration fund was the lowest in the province of East Java at 29.10%, although the budget allocation of the de-concentration funds was the highest among other provinces. The second lowest implementation belonged to the province of West Java (39.12%) although the budget allocation of the de-concentration funds was the third highest, after the provinces of East Java and Central Java. The province with the highest implementation was South Sulawesi at 93.65%. It is necessary to conduct further study, especially regarding the low absorption of de-concentration fund in some provinces, including an analysis of the sufficiency of the allocation in every program by province.

FIGURE4.4
IMPLEMENTATION OF HEALTH DE-CONCENTRATION FUND BY PROVINCE IN INDONESIA, 2015



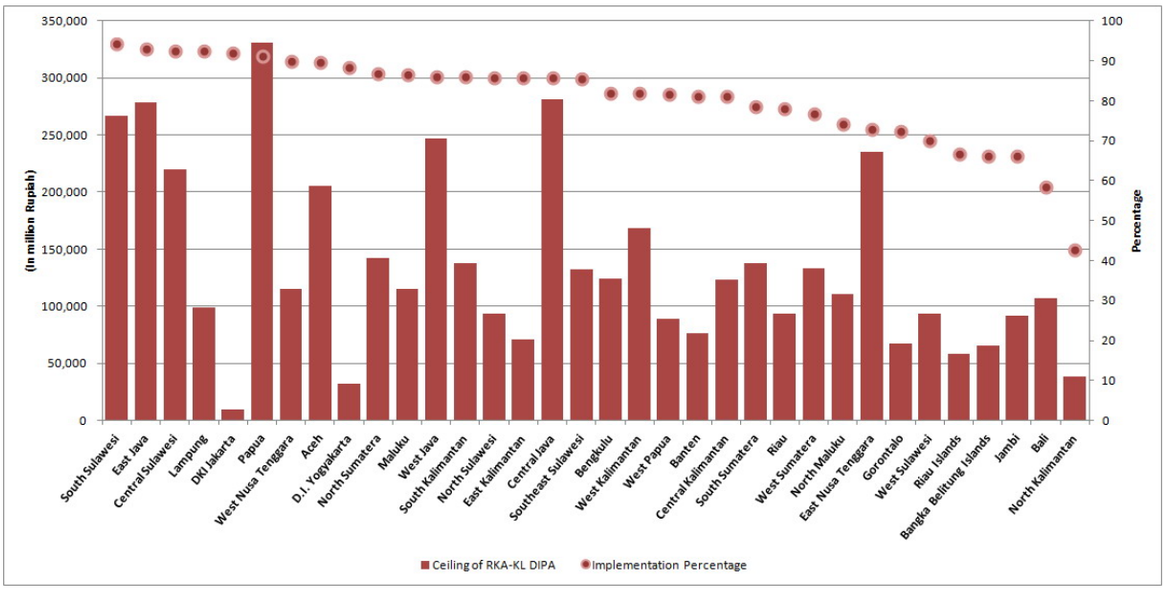
Source: Bureau of Finance and State-Owned Asset, Ministry of Health RI, 2016

As much as 3,836,633,602,922 rupiahs (83.62%) was implemented from total allocation of 4,588,306,686,000 rupiahs for Co-Administration Fund of the Ministry of Health. The total allocation fund was distributed by the Ministry of Health to all districts/municipalities in all provinces in Indonesia. An overview of the percentage of the budget absorption of Co-Administration Fund of the Ministry of Health by province in 2015 can be seen in Figure 4.5.

From Figure 4.5 it can be seen that the highest implementation of the Co-Administration Fund belonged to the province of South Sulawesi at 94.36%, while the lowest belonged to North Kalimantan at 42.83%. Meanwhile, if viewed from the budget allocation, the highest budget allocation for Co-Administration belonged to the province of Papua and the lowest to DKI Jakarta. More detailed data and information on the

allocation and implementation of Co-Administration Fund in 2015 can be found in Annex 4.5.

FIGURE 4.5
CEILING AND IMPLEMENTATION OF CO-ADMINISTRATION FUND
BY PROVINCE IN INDONESIA, 2015



Source: Bureau of Finance and State-Owned Asset, Ministry of Health RI, 2016

C. HEALTH OPERATIONAL SUPPORT

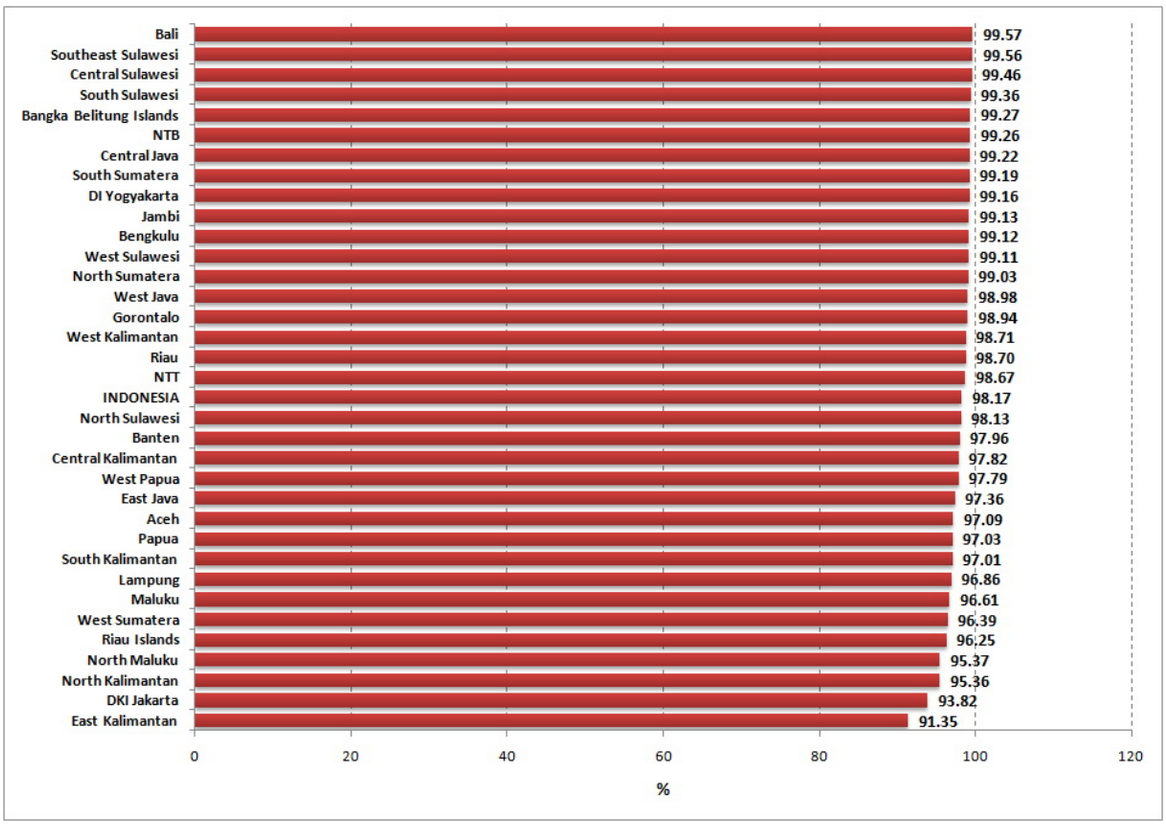
Health Operational Support (*BOK* or *Bantuan Operasional Kesehatan*) refers to support from the central government to local governments to accelerate the achievement of MDGs in health sector by 2015 through increased performance of health centers and their network as well as *Poskesdes/Polindes*, *Posyandu* and other Community Based Health Services (*UKBM* or *Usaha Kesehatan Bersumberdaya Masyarakat*) in administering health services, be it promotive or preventive. Health Operational Support Fund refers to the National Budget fund from the Ministry of Health disbursed to district/municipality governments through the mechanism of Co-Administration. It is also expected that the support may improve the management quality of health centers, particularly in the planning and mini workshops, may increase the efforts to mobilize the potential of the community in improving health standard, and may improve healthcare coverage in promotive and preventive manners undertaken by the health centers and their network, as well as *poskesdes* and *posyandu*.

The utilization of *BOK* fund is focused on some promotive and preventive health efforts including Maternal and Child Health (*KIA* or *Kesehatan Ibu dan Anak*), Family Planning (*KB* or *Keluarga Berencana*), immunization, nutrition improvement for the

community, health promotion, environmental health and disease control, and other health efforts performed to handle the health risks and major problems in the local area with reference to the achievement target of Minimum Service Standards (*SPM* or *Standar Pelayanan Minimal*) of Health and the achievement of MDGs in Health Sector by 2015.

During implementation, a number of improvements have been made in distributing *BOK* fund through the Co-Administration. The implementation of *BOK* fund utilization in 2015 amounted to 1,354,055,978,464 rupiahs from the total allocation of 1,379,267,771,000 rupiahs with percentage of implementation at 98.17%. That figure was higher than that in 2014 at 97.98%.

FIGURE 4.6
PERCENTAGE OF ABSORPTION OF HEALTH OPERATIONAL SUPPORT (*BOK*) FUND BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

From the Figure above we can see that the province of Bali had the highest absorption of *BOK* fund at 99.57% and East Kalimantan had the lowest at 91.35%. The data and information concerning the allocation and implementation of *BOK* funds by province in 2015 can be found in Annex 4.6.

BOK fund as a supplement to operational funding for health centers is expected to contribute to the achievement of national health development indicators through various

activities undertaken by the health centers. Provincial health offices as the extension of authority of the Ministry of Health are also expected to play their role in providing guidance and evaluation of the implementation of *BOK* fund in the district/municipality. With the support from *BOK* fund, health personnel may no longer experience difficulties in their activities in facilitating health access to the public.

BOK fund is not to be understood as a major funding in the administration of health efforts in the health centers, but only as an additional fund in the form of assistance. The local government is still obliged to allocate operational funds for health centers under their jurisdiction.

The total 2015 *BOK* fund as much as 1,379,267,771,000 rupiahs was allocated for 9,719 Health Centers and 506 Units. The disbursement mechanism used that of Co-Administration Fund.

BOK fund contributes to the improvement of the performance of health workers in health centers in the implementation of promotive and preventive health programs, especially in operational activities in the field. Most of the *BOK* fund in health centers is utilized to support programs of Maternal and Child Health, followed by those of Nutrition, Health Promotion, Immunization, and Disease Control and Environmental Health. In accordance with the Technical Instructions of *BOK* 2015, at least 60% of *BOK* fund is to be utilized to support the national priority health programs especially the MDGs. The evaluation results in 2015 show that in general there was an increase in the achievement indicator of program targets, especially for Maternal and Child Health, Nutrition, Disease Control (HIV/AIDS, TB and Malaria) and Environmental Health (especially sanitation). The evaluation results in a number of districts also showed an increase in program coverage compared to those of the previous year.

The main problems in the implementation of *BOK* fund are the lack of financial personnel in health centers and their low capabilities in preparing financial accountability, the lack of motivation of the managing team from the District/Municipality Health Office, the lack of inter-program coordination in Health Offices in verifying the Plan of Action (*POA*) and financial accountability, and the quality of the *POA* prepared by health centers that is still not optimal. The main problems with the program, on the other hand, are the low amount, distribution, and quality of health human resources, and the lack of facilities, infrastructure, and medical equipment to support the implementation of the programs. Besides those problems, another thing that should be of concern is the lack of commitment of the local governments to support the provision of operational funding for health programs in health centers. In general, health centers have been experiencing a reduction in operational funds since the *BOK* came into effect.

How *BOK* fund has a bearing on the coverage of health promotion programs can be seen based on the data of program performance from 2013 to 2014 provided by district/municipality health offices. We can see there is an increased performance, particularly on primary healthcare programs, after *BOK* fund was provided. One example is the indicator of pregnant women 4th visit (K4), based on the data of the program

performance, the percentage of which increased from 86.70% in 2014 to 87.45% in 2015.

Based on the input from the local health offices during monitoring the evaluation of issues in the implementation of BOK, the problems can be solved by three key words, namely: **PROACTIVE**, faster **VERIFICATION**, and **COORDINATION** among the State Treasury Office (*KPPN* or *Kantor Pelayanan Perbendaharaan Negara*), health offices, and health centers in either programs or finance sector.

D. NATIONAL HEALTH INSURANCE

To realize the global commitment as mandated by 58th World Health Assembly (WHA) Resolutions held in 2005 in Geneva requesting every country to develop Universal Health Coverage (UHC) for the entire population, the government is responsible for the implementation of public health insurance through the National Health Insurance (*JKN* or *Jaminan Kesehatan Nasional*) program.

A number of efforts have been initiated by the government to realize the commitment by organizing some forms of social security in the health sector, including through *PT Askes* (*Persero*) and *PT Jamsostek* (*Persero*) which serve, among others, civil servants, pensioners, veterans, and private employees. For the poor and the have-nots, the central government provides Community Health Insurance (*Jamkesmas* or *Jaminan Kesehatan Masyarakat*) and the local governments provide Regional Health Insurance (*Jamkesda* or *Jaminan Kesehatan Daerah*). However, those schemes are still fragmented or divided, making health care costs and quality of service difficult to control.

To overcome the problem, the government issued Law Number 40 Year 2004 on National Social Security System (*SJSN* or *Sistem Jaminan Sosial Nasional*). This Law mandated that the social security program is mandatory for all citizens. This includes Health Insurance programs organized by social security organizing institutions. Such institution shave been regulated by Law Number 24 Year 2011 on the Social Security Administering Agency (*BPJS* or *Badan Penyelenggara Jaminan Sosial*) comprising *BPJS Kesehatan* (Health) and *BPJS Ketenaga kerjaan* (Employment). *BPJS Kesehatan* has been organizing Health Insurance program since 1 January 2014. The program has been referred to as *JKN* (*Jaminan Kesehatan Nasional* or National Health Insurance) program.

JKN is organized to provide health protection in the form of health care benefits in order to meet basic health needs provided to every person who either has paid the premium or has his/her premium paid by the government. *JKN* provides two benefits: medical and non-medical. Medical benefits come in the form of comprehensive health services (promotive, preventive, curative and rehabilitative) based on the medical indications which are not bound by the amount of premium paid. Non-medical benefits include accommodation and ambulance. The accommodation benefits for inpatient care are based on the type of classes stated in the scheme. The ambulance benefits are only

provided for referral patients between health facilities, with certain conditions set by *BPJS Kesehatan*.

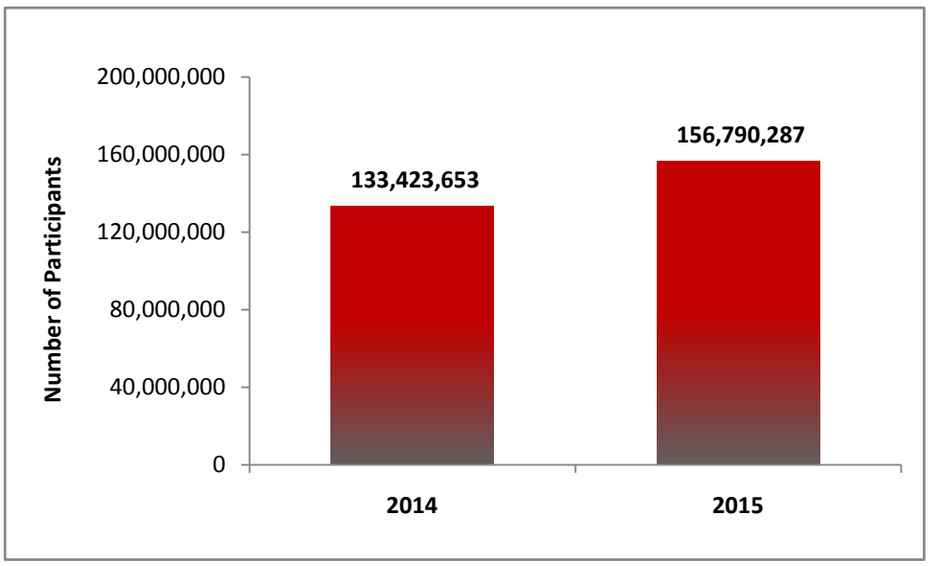
The benefits that *JKN* provides include prevention and treatment services including access to drugs and consumable medical materials in accordance with medical needs. The prevention services (both promotive and preventive) entitle *JKN* participants to the following: individual health counseling, which covers at least one counseling about managing disease risk factors as well as clean and healthy behavior; basic immunization, which covers Baccile Calmett Guerin (BCG), diphtheria pertussis tetanus and Hepatitis B (DPT-HB), as well as Polio and Measles; family planning, which covers counseling, basic contraception, vasectomy and tubectomy; health screening to selected participants aimed to detect the risk of certain diseases and prevent the continued impact;counseling ontypes of cancer; cardiac surgery;and even dialysis (for kidney failure).

According to the Regulation of the Minister of Health Number 28 regarding Guidelines on *JKN* Program, participants of *JKN* program include everyone, including foreigners who have been working for a minimum of six months in Indonesia, who either pays for the premium or has his/her premium paid by the government. The participants of *JKN* consist of two groups:Recipients of Contribution Subsidy (*PBI* or *Penerima Bantuan Iuran*) of health insurance and Non Recipients of Contribution Subsidy (Non *PBI*). Recipients of Contribution Subsidy are the poor and the have-nots. Non Recipients of Contribution Subsidy include Wage-Earning Workers and members of their families, Non Wage-Earning Workers and members of their families, as well as Non Workers and their family members.

In the early stages of *JKN* implementation which came into effect on 1 January 2014, the initial participants include *PBI JKN* participants (from *Jamkesmas* program), National Army members and civil servants of the Ministry of Defense and members of their families, National Police members and civil servants in the National Police and members of their families, social health insurance participants from *PT. Askes* (*Persero*) and members of their families, Health care Insurance (*JPK* or *Jaminan Pemeliharaan Kesehatan*) participants from *PT.* (*Persero*) Jamsostek and members of their families, Regional Health Insurance (*Jamkesda* or *Jaminan Kesehatan Daerah*) participants who had been integrated, and independent participants (both Non Wage-Earning and Wage-Earning Workers).

Up to December 2015, the total number of *JKN* participants reached 156,790,287 people. When compared with 2014, the number *BPJS Kesehatan* participants increased by 17.51%, from 133,423,653 in 2014 to 156,790,287 in 2015.

FIGURE 4.7
INCREASING NUMBER OF *BPJS KESEHATAN* PARTICIPANTS
2014 AND 2015

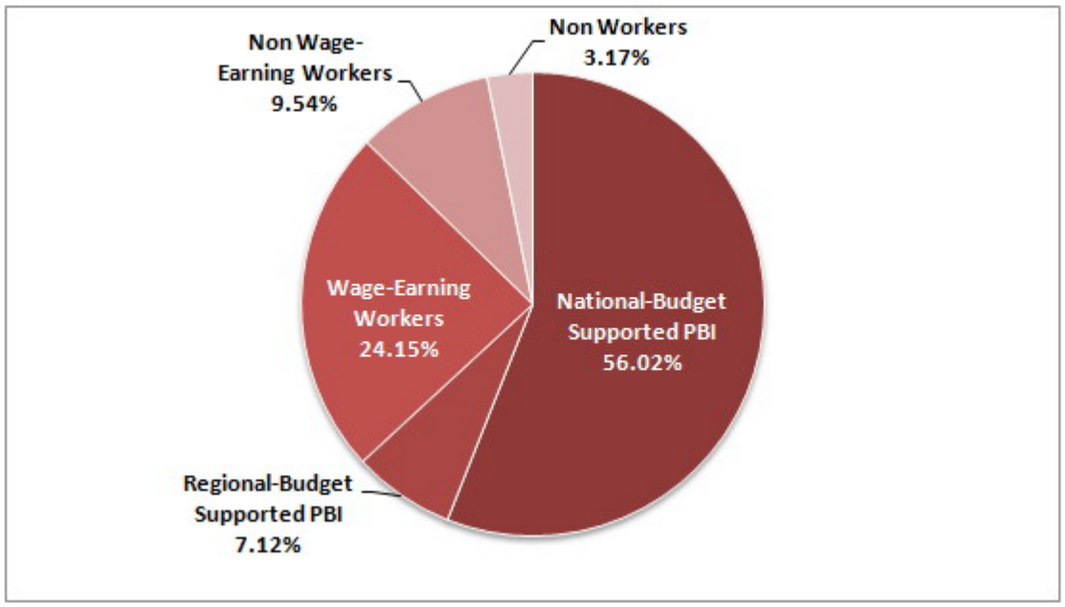


Source: *BPJS Kesehatan*, 2015

Participants of *BPJS Kesehatan* in 2015 consisted of *PBI* participants, amounting to 98,999,228 people and non *PBI* participants, amounting to 57,791,059 people. *PBI* participants consisted of participants supported by the national budget as many as 87,828,613 participants and those supported by the regional budget as many as 11,170,615 participants. Non *PBI* participants, on the other hand, consisted of wage-earning workers as many as 37,862,522 participants, non wage-earning workers as many as 14,961,768 participants, and non workers as many as 4,966,769 participants.

According to the proportions, the highest number of participants of *BPJS Kesehatan* in 2015 came from national budget *PBI* segment at 56.02%, followed by wage-earning workers (*PPU* or *Pekerja Penerima Upah*) segment at 24.15%, and non wage-earning workers (*PBPU* or *Pekerja Bukan Penerima Upah*) segment at 9.54%. The lowest proportion of *BPJS Kesehatan* participants came from Non Workers (*BP* or *Bukan Pekerja*) segment at 3.17%. The proportion of *BPJS Kesehatan* participants per 31 December 2015 by participant segment can be seen in the following figure.

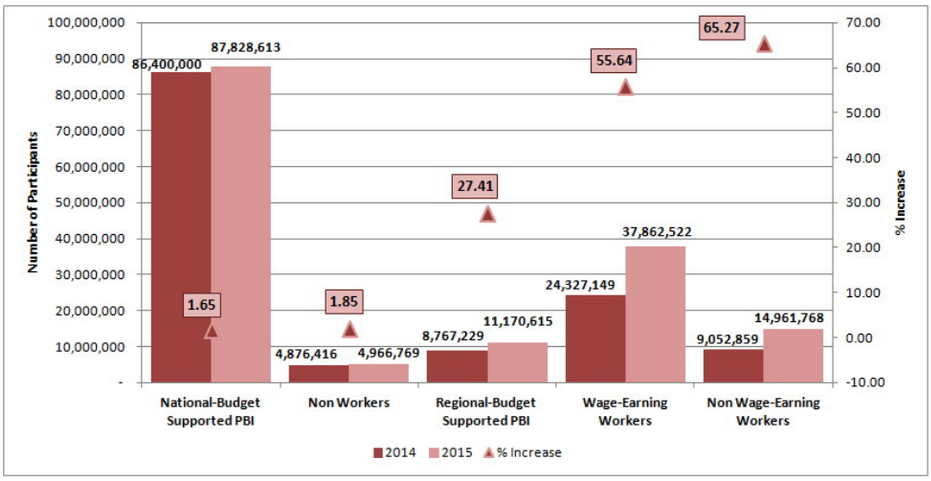
FIGURE 4.8
PROPORTION OF PARTICIPANTS OF *BPJS KESEHATAN* PER 31 DECEMBER 2015



Source: *BPJS Kesehatan*, 2015

However, if viewed from the increase of number of participants from the previous year, the highest comes from Non Wage-Earning Workers (*PBPU*) segment at 65.27%, followed by Wage-Earning Workers (*PPU*) at 55.64%. The growth of number and percentage of participants of *BPJS Kesehatan* in 2014 - 2015 by participant segment can be seen in Figure 4.9.

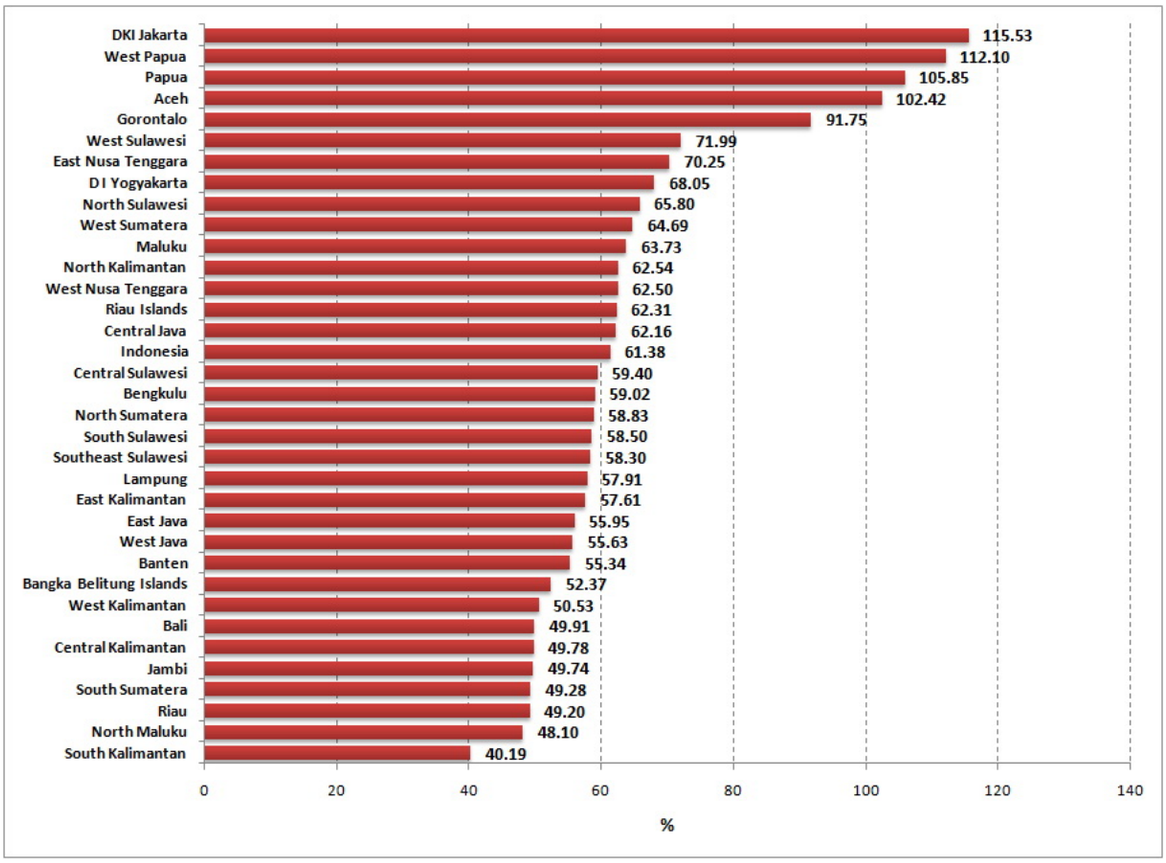
FIGURE 4.9
NUMBER OF PARTICIPANTS OF *BPJS KESEHATAN*
BY SEGMENT AND PERCENTAGE OF INCREASE, 2014 – 2015



Source: *BPJS Kesehatan*, 2015

The number of participants of *BPJS Kesehatan* per 31 December 2015 amounted to 61.38% of the total population. The province with the highest participation was Jakarta at 115.53% of the population, while the lowest was South Kalimantan at 40.19% of the population. More detailed data and information on the number of participants of *BPJS Kesehatan* by province in 2015 are presented in Annex 4.7.

FIGURE 4.10
PERCENTAGE OF *BPJS KESEHATAN* PARTICIPATION BY PROVINCE
PER 31 DECEMBER2015



Source: *BPJS Kesehatan*, 2015

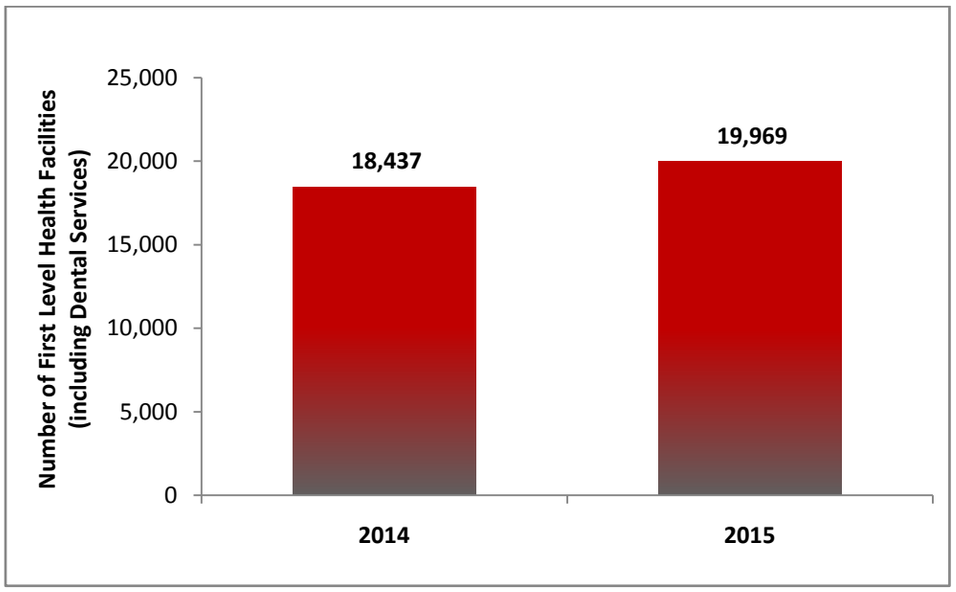
Each *JKN* participant is en titled to health services which include First Level Outpatient Health care (*RJTP* or *Rawat Jalan Tingkat Pertama*) and First Level Inpatient Health care (*RITP* or *Rawat Inap Tingkat Pertama*), Advanced Level Outpatient Health care (*RJTL* or *Rawat Jalan Tingkat Lanjutan*), Advanced Level Inpatient Health care (*RITL* or *Rawat Inap Tingkat Lanjutan*), emergency care, and other health care established by the Minister of Health.

Health services are implemented in stages, starting from the first level health care provided by First Level Health Facilities (*FKTP* or *Fasilitas Kesehatan Tingkat Pertama*) where participants are registered, except in certain circum stances, such as when a

participant is outside the *FKTP* area where s/he is registered or in a state of medical emergency. In the event that a participant requires advanced level healthcare, *FKTP* should refer to the closest Advanced Level Referral Health Facilities (*FKRTL* or *Fasilitas Kesehatan Rujukan Tingkat Lanjutan*) in accordance with the referral system.

When compared with 2014, the number of *FKTP* in cooperation with *BPJS Kesehatan* had a 8.31% increase; from 18,437 *FKTP* in 2014 to 19,969 in 2015.

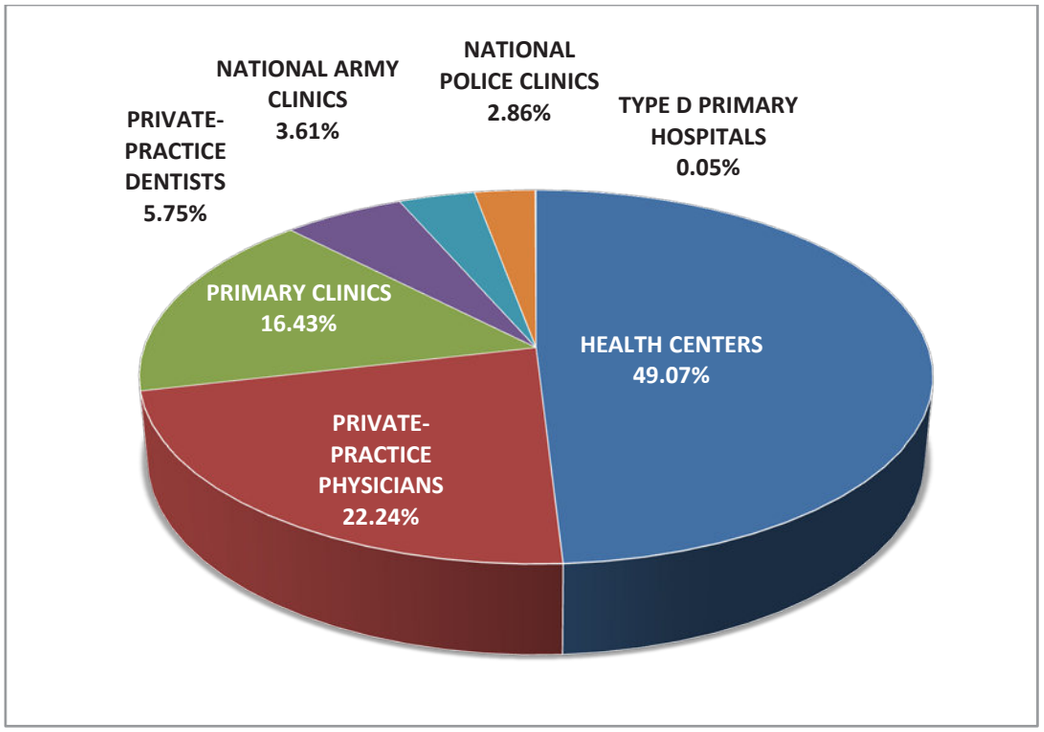
FIGURE 4.11
INCREASING NUMBER OF FIRST LEVEL HEALTH FACILITIES (*FKTP*) IN COOPERATION WITH *BPJS KESEHATAN*, 2014 AND 2015



Source: *BPJS Kesehatan*, 2015

The highest proportion of *FKTP* in cooperation with *BPJS Kesehatan* in 2015 comes from health centers, at 49.07%, followed by Private-Practice Physicians (*DPP* or *Dokter Praktik Perorangan*) at 22.24%, and Primary Clinics (*Klinik Pratama*) at 16.43%. The lowest proportion of *FKTP*, on the other hand, comes from Type D Primary Hospitals at 0.05%. The proportion of *FKTP* in cooperation with *BPJS Kesehatan* per 31 December 2015 by type of *FKTP* can be seen in Figure 4.12.

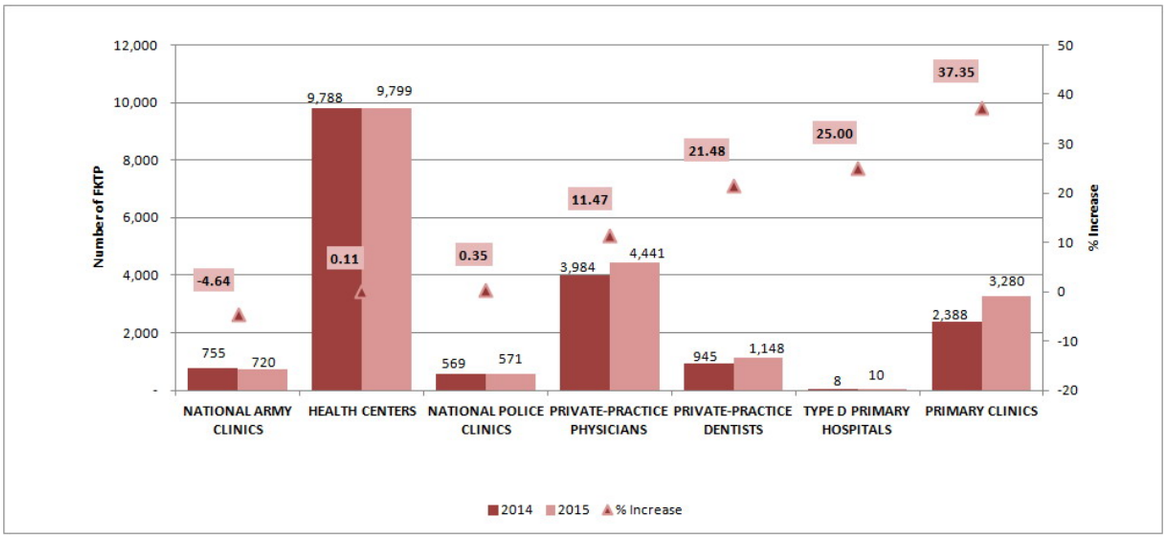
FIGURE 4.12
PROPORTION OF FIRST LEVEL HEALTH FACILITIES (*FKTP*)
IN COOPERATION WITH *BPJS KESEHATAN*
BY TYPE PER 31 DECEMBER 2015



Source: *BPJS Kesehatan*, 2015

The highest number of *FKTP* in cooperation with *BPJS Kesehatan* per 31 December 2015 comes from health centers, followed by Private-Practice Physicians amounting to 4,441, then by Primary Clinics amounting to 3,280, and finally by Type D Primary Hospitals amounting to 10. However, if seen from the percentage of increase compared with the previous year, the *FKTP* that has the highest increase is Primary Clinicsat37.35%, followed by Type D Primary Hospitals at25%.

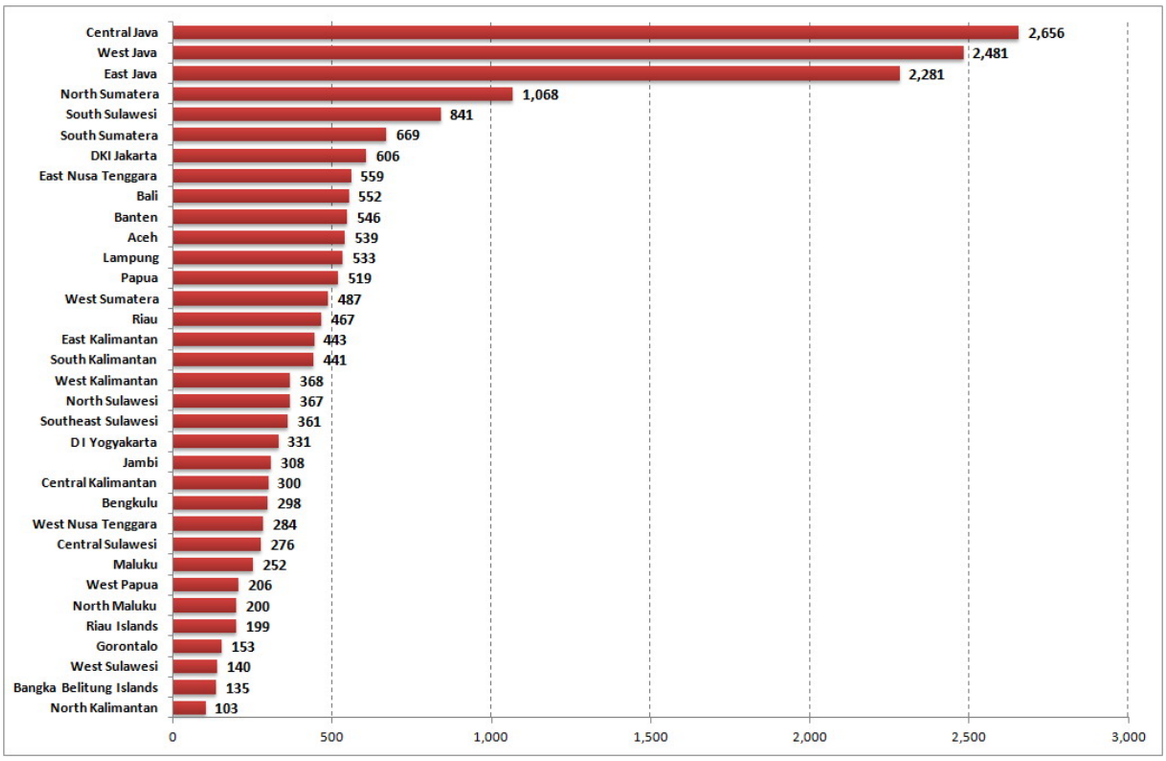
FIGURE 4.13
NUMBER OF FIRST LEVEL HEALTH FACILITIES (*FKTP*)
IN COOPERATION WITH *BPJS KESEHATAN* AND THE PERCENTAGE OF INCREASE
BY TYPE IN 2014 – 2015



Source: *BPJS Kesehatan*, 2015

When viewed from the distribution of the number of *FKTP* in cooperation with *BPJS Kesehatan*, the highest number comes from the province of Central Java with 2,656, and the lowest from North Kalimantan with 103. The data and information regarding *FKTP* in cooperation with *BPJS Kesehatan* in 2015 are presented in Annex 4.8.

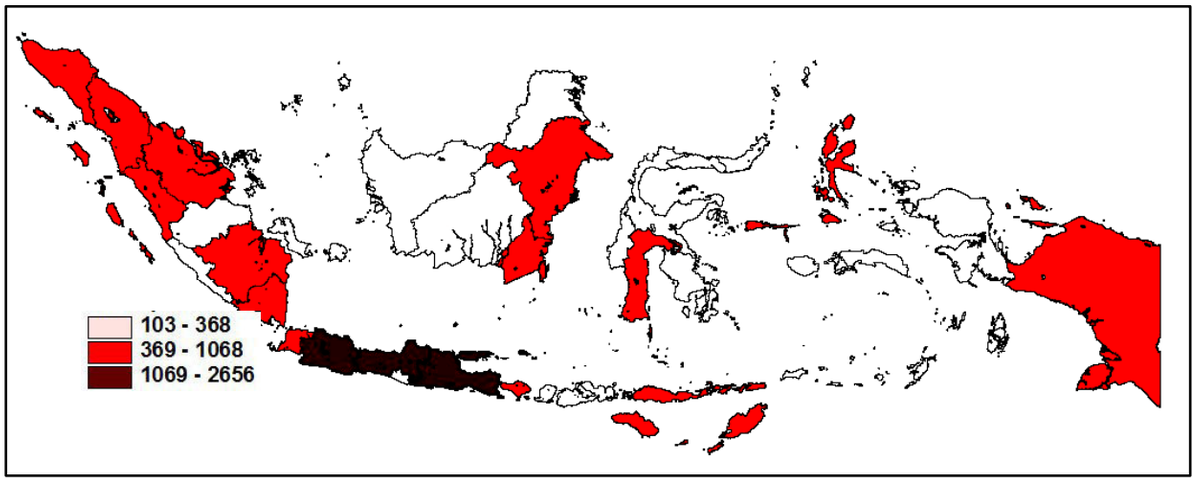
FIGURE 4.14
NUMBER OF FIRST LEVEL HEALTH FACILITIES (*FKTP*)
IN COOPERATION WITH *BPJS KESEHATAN* BY PROVINCE
PER 31 DECEMBER 2015



Source: *BPJS Kesehatan*, 2015

Figure 4.15 gives an overview of the distribution of the number of *FKTP* in cooperation with *BPJS Kesehatan* in 2015. The said overview is grouped into three, namely (1) pink for the provinces with 103 to 368 *FKTP* in cooperation with *BPJS Kesehatan*, (2) red for those with 369 to 1,068 *FKTP*, and (3) dark red for those with 1,069 to 2,656.

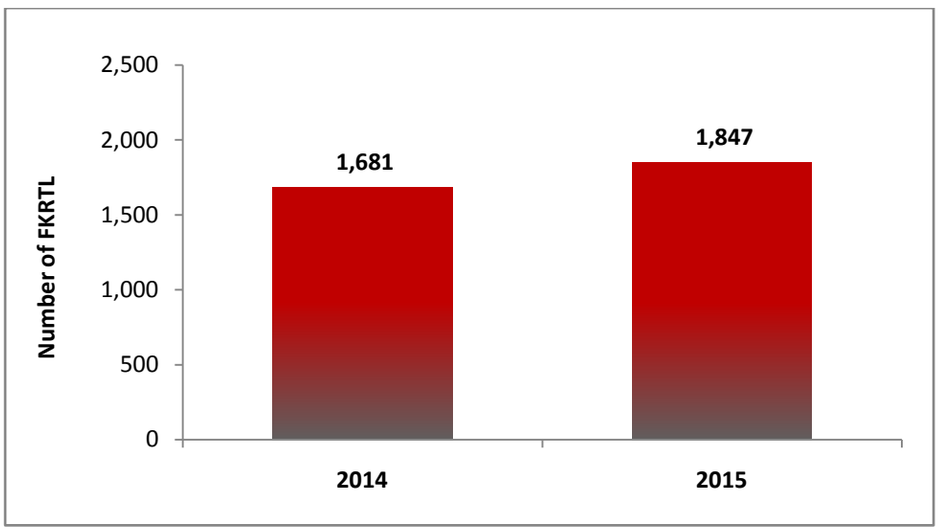
FIGURE 4.15
DISTRIBUTION OF *FKTP* IN COOPERATION WITH *BPJS KESEHATAN*, 2015



Source: *BPJS Kesehatan*, 2015

Number of Advanced Level Referral Health Facilities (*FKRTL* or *Fasilitas Kesehatan Rujukan Tingkat Lanjutan*) in cooperation with *BPJS Kesehatan* per 31 December 2015 amounted to 1,847 units. When compared with those in 2014, the number increased by 9.88%, from 1,681 in 2014 to 1,847 in 2015. The *FKRTL* shall refer back *JKN* participants with recommendation and follow-up actions that should be taken if the patients can sufficiently be treated in the referring First Level Health Facilities (*FKTP*).

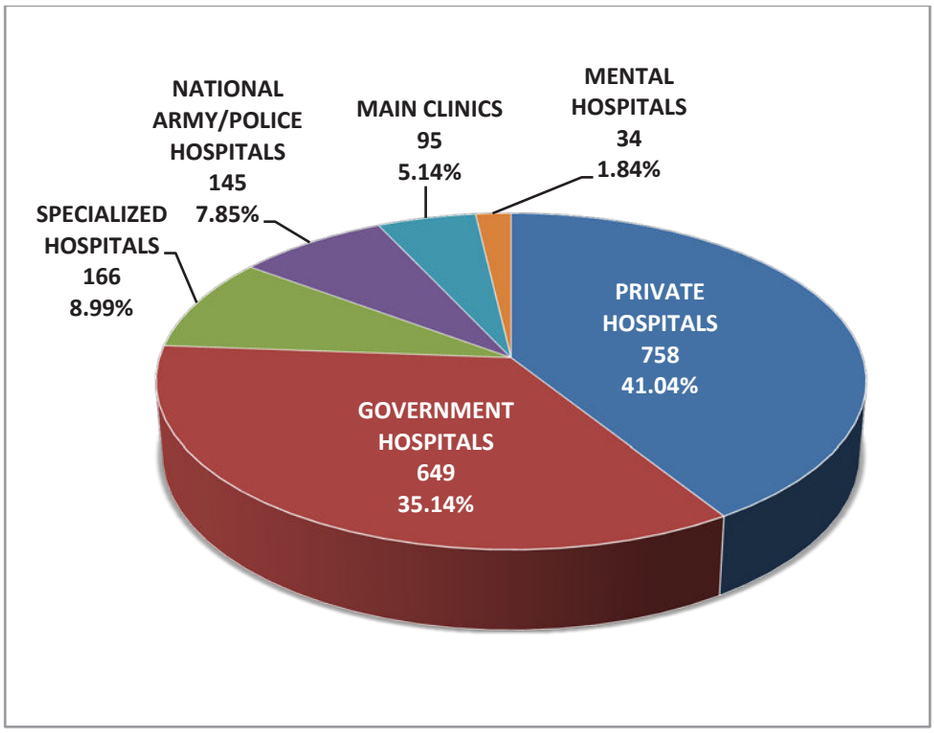
FIGURE 4.16
INCREASING NUMBER OF ADVANCED LEVEL REFERRAL HEALTH FACILITIES (*FKRTL*)
IN COOPERATION WITH *BPJS KESEHATAN*, 2014 AND 2015



Source: *BPJS Kesehatan*, 2015

The highest proportion of *FKRTL* in cooperation with *BPJS Kesehatan* in 2015 comes from Private Hospitals, at 41.04%, followed by Government Hospitals (Types A, B, C, and D) at 35.14%, and Specialized Hospitals at 8.99 %. The lowest proportion of *FKRTL*, on the other hand, comes from Mental Hospitals at 1.84%. The proportion of *FKRTL* in cooperation with *BPJS Kesehatan* per 31 December 2015 by type of *FKRTL* and province can be seen in Annex 4.9.

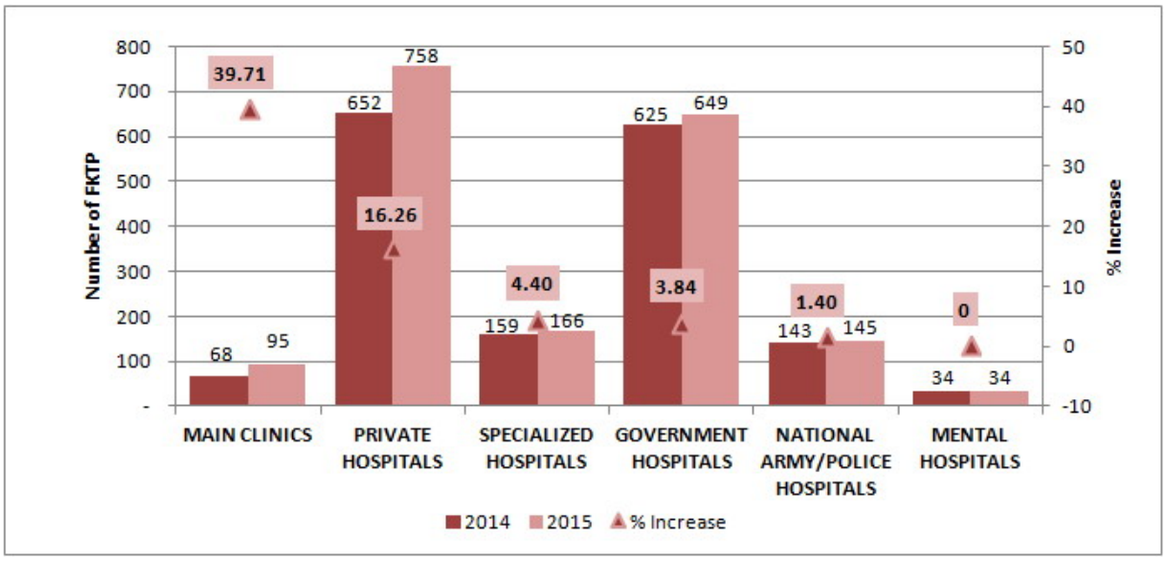
FIGURE 4.17
PROPORTION OF TYPES OF ADVANCED LEVEL REFERRAL HEALTH FACILITIES (*FKRTL*) IN COOPERATION WITH *BPJS KESEHATAN* PER 31 DECEMBER 2015



Source: *BPJS Kesehatan*, 2015

The highest number of *FKRTL* in cooperation with *BPJS Kesehatan* per 31 December 2015 comes from Private Hospitals amounting to 758 units, followed by Government Hospitals amounting to 649, Specialized Hospitals amounting to 166, and Mental Hospitals as the lowest, amounting to 34 units. However, if seen from the percentage of increase compared with the previous year, the *FKRTL* that has the highest increase is Main Clinics at 39.71%, followed by Private Hospitals at 16.26%.

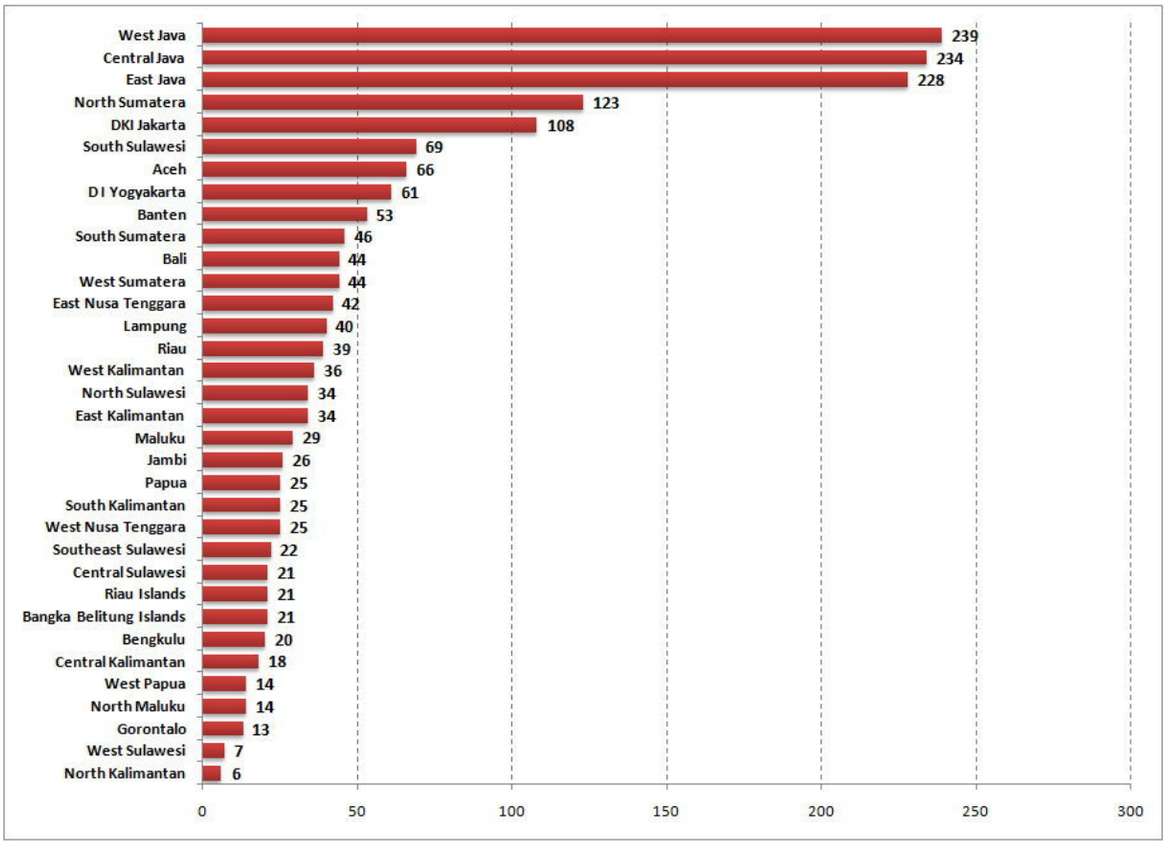
FIGURE 4.18
NUMBER OF ADVANCED LEVEL REFERRAL HEALTH FACILITIES (*FKRTL*)
IN COOPERATION WITH *BPJS KESEHATAN* AND THE PERCENTAGE OFINCREASE
BY TYPE, 2014 – 2015



Source: *BPJS Kesehatan*, 2015

The province with the highest number of *FKRTL* in cooperation with *BPJS Kesehatan* is West Java with as many as 239 units. The province with the lowest number, on the other hand, is North Kalimantan with as many as 6 units. More complete data and information about the number of *FKRTL* in cooperation with *BPJS* per 31 December 2015 by type and province can be found in Annex 4.9.

FIGURE 4.19
NUMBER OF ADVANCED LEVEL REFERRAL HEALTH FACILITIES (*FKRTL*)
IN COOPERATION WITH *BPJS KESEHATAN*
PER 31 DECEMBER 2015

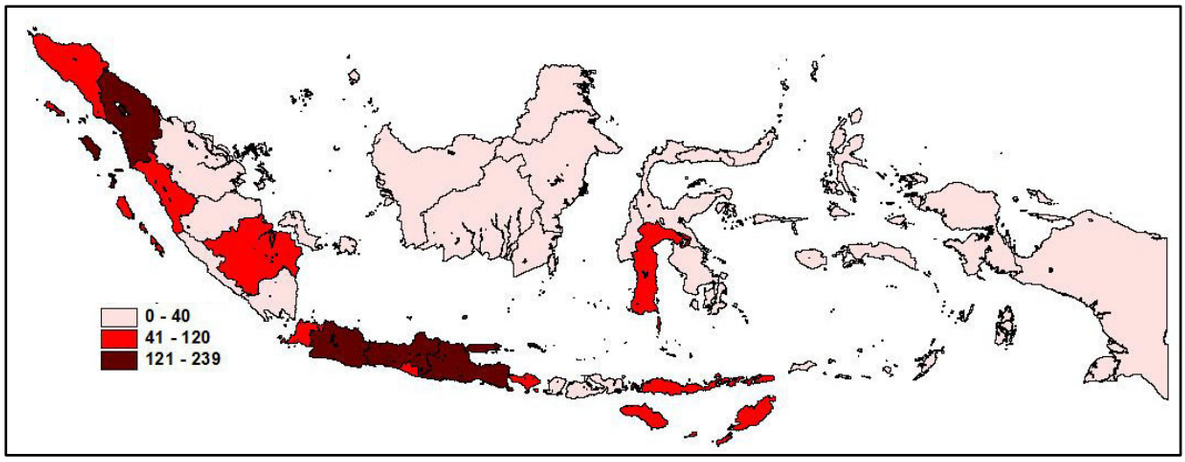


Source: *BPJS Kesehatan*, 2015

In general, there is an increasing number of *FKRTL* in cooperation with *BPJS Kesehatan* from 2014 to 2015, as high as 14.51%. In 2014, there were 1,613 *FKRTL* and this number increased to 1,847 in 2015. If seen from the type, the highest increase comes from Specialized Hospitals. In addition, in 2014 there were no main clinics that were in cooperation with *BPJS Kesehatan*, but in 2015 a total of 95 main clinics were listed in cooperation with *BPJS*.

Figure 4.19 gives an overview of the distribution of the number of *FKRTL* in cooperation with *BPJS Kesehatan* in 2015. The said overview is grouped into three, namely (1) pink for the provinces with 0 to 40 *FKRTL* in cooperation with *BPJS* health, (2) red for those with 41 to 120 *FKRTL*, and (3) dark red for those with 121 to 239.

FIGURE 4.20
DISTRIBUTION OF FKRTL IN COOPERATION WITH *BPJS KESEHATAN*, 2015



Source: *BPJS Kesehatan*, 2015

CHAPTER V

FAMILY HEALTH

Chapter V
FAMILY HEALTH

Law Number 52 Year 2009 concerning Population Growth and Family Development defines family as the smallest unit of society comprising husband and wife, or husband, wife, and their child, or father and his child, or mother and his child. According to Salvicion and Cells (1998), in a family there co-exist two or more than two persons related by blood, marriage or adoption in the life of a single household, interacting with each other, having their respective roles, and creating and maintaining some culture.

Furthermore, the Government Regulation of the Republic of Indonesia Number 87 Year 2014 concerning Population Growth and Family Development, Family Planning, and Family Information System, states that family development is intended to create quality family which lives in a healthy environment. In addition to a healthy environment, still according to the Government Regulation, the health of each member of the family itself is also one of the requirements of a quality family.

As an integral component of society, family has a significant role in the health standard. Family contributes to the optimization of the growth, development, and productivity of all its members by meeting the nutritional needs and ensuring the health of the family members. Among the components of a family,mothers and children are considered vulnerable. This is particularly related to the stages of pregnancy, childbirth and post-partum of the mothers and to the stages of growth and development of the children. For this reason, maternal and child health is one of the priorities of health development in Indonesia.

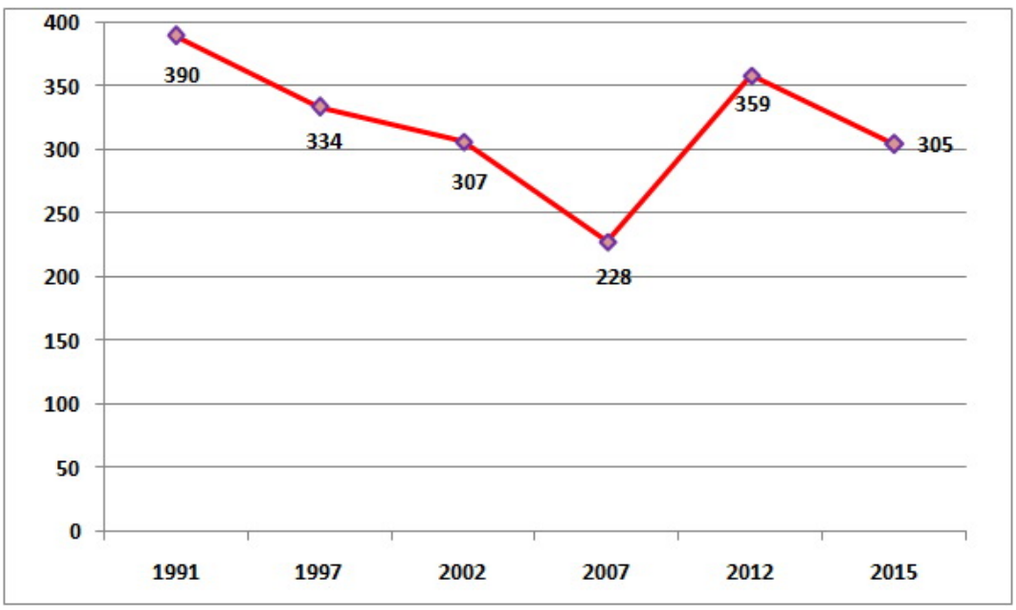
Mothers and children are family members who should get priority in the implementation of health efforts. This is due to the fact that they are vulnerable to the family condition and the surroundings in general. Therefore, an assessment of the health status and the performance of maternal and child health efforts are essential.

A. MATERNAL HEALTH

The performance of maternal health efforts can be evaluated from Maternal Mortality Rate (*AKI* or *Angka Kematian Ibu*) indicator. *AKI* refers to the number of maternal deaths during pregnancy, childbirth and postpartum caused by the three said periods or their management (not from other causes such as accidents, fall injuries, and such) in every 100,000 live births.

This indicator is not only able to assess maternal health programs, but it is also able to assess public health standard, because of its sensitivity to healthcare improvement, both in terms of accessibility and quality. The decreasing *AKI* in Indonesia occurred from 1991 to 2007, from 390 to 228 deaths. However, Demographic and Health Survey (*SDKI* or *Survei Demografi dan Kesehatan Indonesia*) in 2012 showed a significant increase in *AKI* with 359 maternal deaths per 100,000 live births. *AKI* showed another decrease with 305 maternal deaths per 100,000 live births based on the Intercensal Population Survey (*SUPAS* or *Survei Penduduk Antar Sensus*) in 2015. An overview of *AKI* in Indonesia from 1991 to 2015 can be seen in Figure 5.1 below.

FIGURE 5.1
MATERNAL MORTALITY RATE IN INDONESIA, 1991 – 2015



Source: Statistics-Indonesia, Demographic and Health Survey 1991-2012

In an effort to reduce *AKI*, the government through the Ministry of Health in 1990 launched safe motherhood initiative, a program to ensure all women get the care needed for safe and healthy pregnancy and delivery. The effort is followed up with Mother Care Movement program in 1996 initiated by the President of the Republic of Indonesia. The program involves sectors other than health. One major program aimed at reducing maternal mortality rate was set to assign midwives into villages on a large scale to facilitate healthcare access for mothers and newborns for the public. Another effort was also initiated, namely Making Pregnancy Safer strategy, which was launched in 2000.

In 2012 the Ministry of Health launched Expanding Maternal and Neonatal Survival (*EMAS*) program in an attempt to reduce maternal and neonatal mortality by 25%. The program was implemented in provinces and districts with high number of maternal and neonatal mortality, namely North Sumatera, Banten, West Java, Central Java, East Java, and South Sulawesi. Those provinces were listed owing to the fact that 52.6% of the total incidence of maternal mortality in Indonesia took place in the six said provinces. Therefore, by reducing maternal mortality in them, it is expected that national maternal mortality will be reduced significantly.

EMAS program seeks to reduce maternal mortality and neonatal mortality rates by: 1) improving the quality of obstetric and neonatal emergency care at least in 150 *PONEK* hospitals (*PONEK* =Comprehensive Obstetric and Neonatal Emergency Care) and 300 *PONED* health centers/*Balkesmas* (*PONED*= Basic Obstetric and Neonatal Emergency Care); and 2) strengthening the referral system that is both efficient and effective between health centers and hospitals.

Efforts to accelerate the reduction in *AKI* can be done by ensuring that every mother has access to quality maternal healthcare, such as pregnant women health care, delivery assistance by skilled health personnel in health care facilities, post delivery care for mothers and babies, special care and referral in the event of complications, facilitation of maternity leave, and family planning services.

The following section presents an overview of maternal health efforts which consists of: (1) maternal health care, (2) administration of Tetanus Toxoid immunization for reproductive-age women and pregnant women, (3) delivery health care, (4) postpartum healthcare, (5) obstetric complications care, and (6) contraceptive services.

1. Maternal Healthcare

Maternal healthcare is provided for pregnant women performed by health personnel at healthcare facilities. This process is carried out during the mother's pregnancy age range which is grouped according to the period of gestation that is divided into the first trimester, second trimester and third trimester. The maternal healthcare provided must include the following service elements:

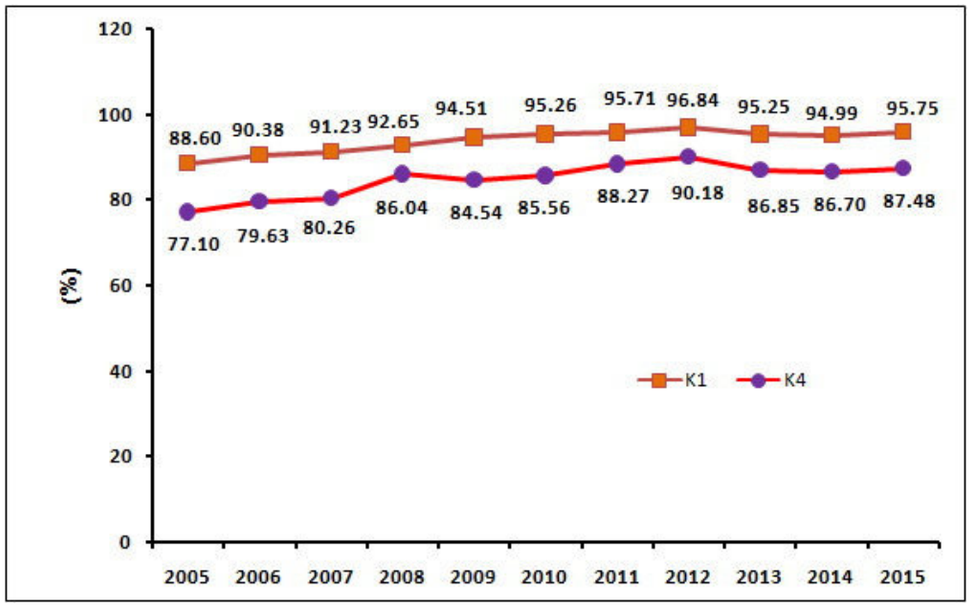
1. Measurement of the weight and the height;
2. Measurement of the blood pressure;
3. Measurement of the Upper Arm Circumference (*LiLA* or *Lingkar Lengan Atas*);
4. Measurement of the apex of the uterus (*fundus uteri*);
5. Determination of tetanus immunization status and administration of tetanus toxoid immunization in accordance with immunization status;
6. Supplementation of iron tablets for at least 90 tablets during pregnancy;
7. Determination of fetal presentation and fetal heart rate (*DJJ* or *Denyut Jantung Janin*);
8. Communication session (providing interpersonal communication and counselling, including family planning);
9. Simple laboratory test services, at least haemoglobin (Hb) test, urine protein test, and blood type test (if it has not been done before); and
10. Management of cases.

In addition to those elements, maternal healthcare must also meet minimum frequency in each trimester: one visit in the first trimester (0-12 weeks of gestational age), one in the second (12-24 weeks of gestational age), and two visits in the third (24 weeks of gestational age until delivery). The standard frequency is recommended to ensure the protection of pregnant women and/or the fetus in the form of early detection of risk factors, as well as prevention and early treatment of complications of pregnancy.

Implementation of the maternal healthcare can be assessed by looking at the coverage of 1st Visit (K1 or *Kunjungan Pertama*) and 4th Visit (K4 or *Kunjungan Keempat*). Coverage of K1 refers to the number of pregnant women who have obtained their first antenatal care by skilled health personnel compared with the number of target pregnant women in the working area in a one-year period. Coverage of K4 refers to the number of pregnant women who have obtained their standard antenatal care, at least four times, in accordance with the recommended schedule for each trimester compared with the number of target pregnant women in the working area in a one-year period. The two indicator scan show the healthcare access for pregnant women and their level of compliance with antenatal check to health personnel.

The coverage of K1 and K4 from 2005 to 2015 is presented in the following figure.

FIGURE 5.2
COVERAGE OF FIRST AND FOURTH VISITS OF MATERNAL HEALTHCARE IN INDONESIA 2005 – 2015

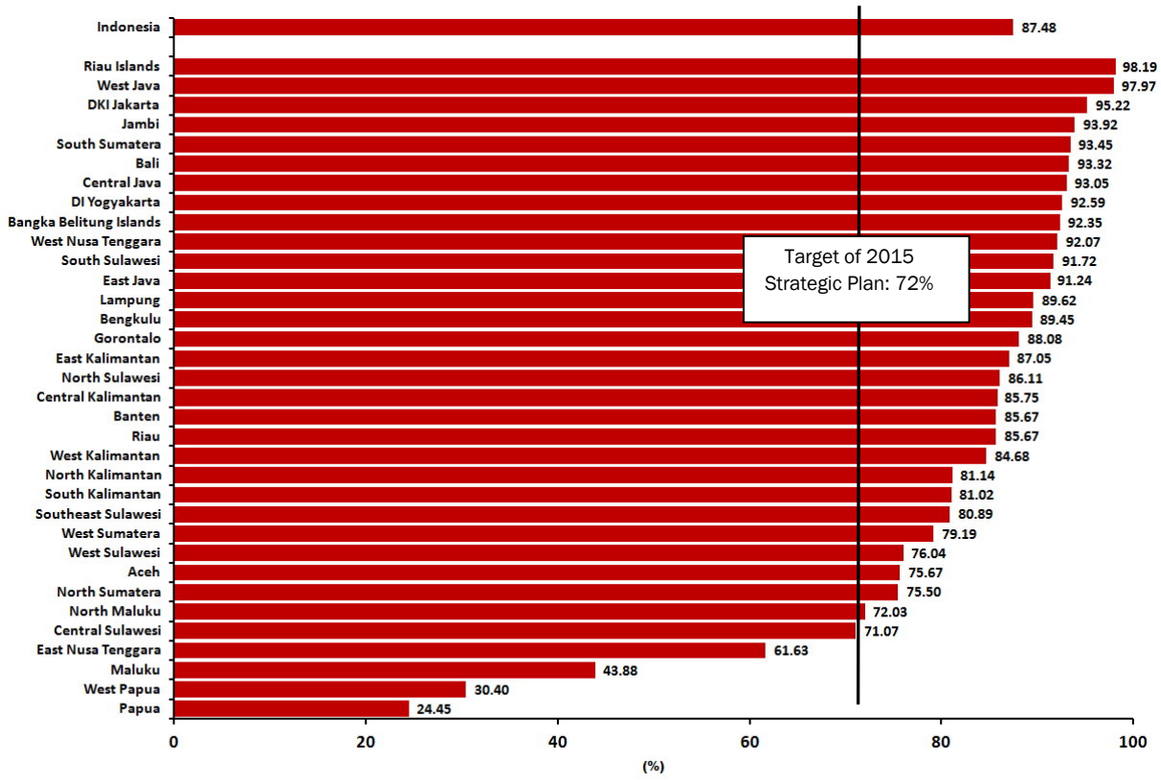


Source: Directorate General of Public Health, Ministry of Health RI, 2016

The figure above shows that in general both indicators (K1 and K4) have an increasing trend. The increase indicates an improvement in public access to maternal healthcare.

The coverage of K4 of maternal healthcare in 2015 met the target of the Strategic Plan of the Ministry of Health by 72%. However, there are five provinces that did not yet reach the target, namely Papua, West Papua, Maluku, East Nusa Tenggara and Central Sulawesi. An overview of pregnant women 4th visit in 2015 in 34 provinces is presented in the following figure.

FIGURE 5.3
COVERAGE OF FOURTH VISITS OF MATERNAL HEALTHCARE IN INDONESIA BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

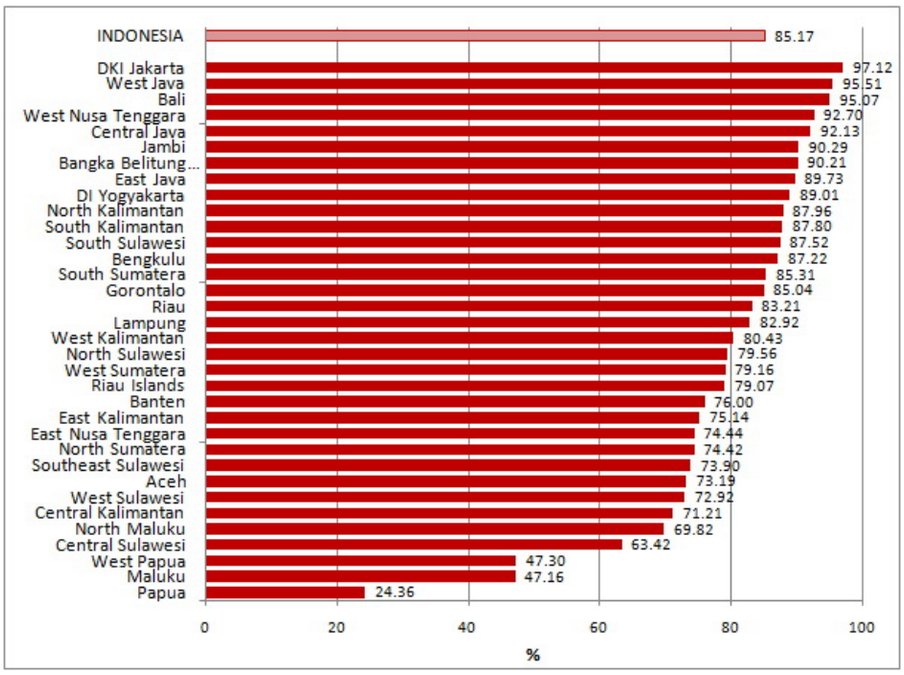
The implementation of maternal healthcare has to deal not only with access problems but also with the quality itself, including the fulfillment of all the components of maternal healthcare upon visits. In terms of availability of health facilities, until December 2015, there were 9,754 health centers across Indonesia with a ratio of 1.15 health centers per 30,000 population. Thus, the ratio of health center to population has reached the ideal ratio of 1: 30,000, but the distribution is still uneven. The existence of health centers should ideally be backed up with good accessibility. This is certainly related to the geographical aspects and transportation facilities and infrastructure. In support of community out reach in their working areas, health centers have also implemented the satellite type of outreach by providing auxiliary health centers. More detailed data and information by province regarding first and fourth visits of maternal healthcare can be seen in Annex 5.1.

One component of maternal healthcare is the supplementation of 90 iron tablets (Fe3). Iron is a mineral that the body needs to form red blood cells (hemoglobin). Besides being used for the formation of red blood cells, iron also plays a role as one of the components in forming myoglobin (a protein that carries oxygen to the muscles), collagen (a protein found in bone, cartilage, and connective tissue), and enzymes.

Iron has a vital role to the growth of fetus. During pregnancy, iron intake should be increased given during pregnancy, blood volume in the mother's body increases. Thus, to support the needs of the mother and the supply of food and oxygen to the fetus through the placenta, more iron intake is required. The iron intakeprovided to the fetus through the placenta will be used for its growth, including the brain development, and will also be stored in the liver in reserve until the baby is 6 months old.

In addition, iron is also helpful in accelerating the wound healing process, especially on injuries sustained in labor. Iron deficiency before pregnancy, if not addressed, can lead to anemia. Anemia is one of the risks of maternal mortality, incidence of babies with low birth weight (LBW), infection of the fetus and the mother, miscarriage and premature birth.

FIGURE 5.4
COVERAGE OF PREGNANT WOMEN SUPPLEMENTED WITH 90 IRON TABLETS BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The national coverage of pregnant women supplemented with Fe3 tablets in 2015 reached 85.17%, not much different than that in 2014 with 85.1%. The province with the highest Fe3 supplementation coverage was DKI Jakarta (97.12%) and the lowest was Papua

(24.36%). Data and information on the coverage of pregnant women supplemented with 90 blood-booster tablets can be seen in Annex 5.2.

2. Administration of Tetanus Toxoid Immunization for Reproductive-Age Women and Pregnant Women

One of the causes of maternal and infant mortality is tetanus infection caused by the bacterium *Clostridium tetani*from unsafe/unsterile labor process or from cuts obtained by the pregnant women before delivery. *Clostridium tetani* enters through open wounds and produces a toxin that attacks the central nervous system.

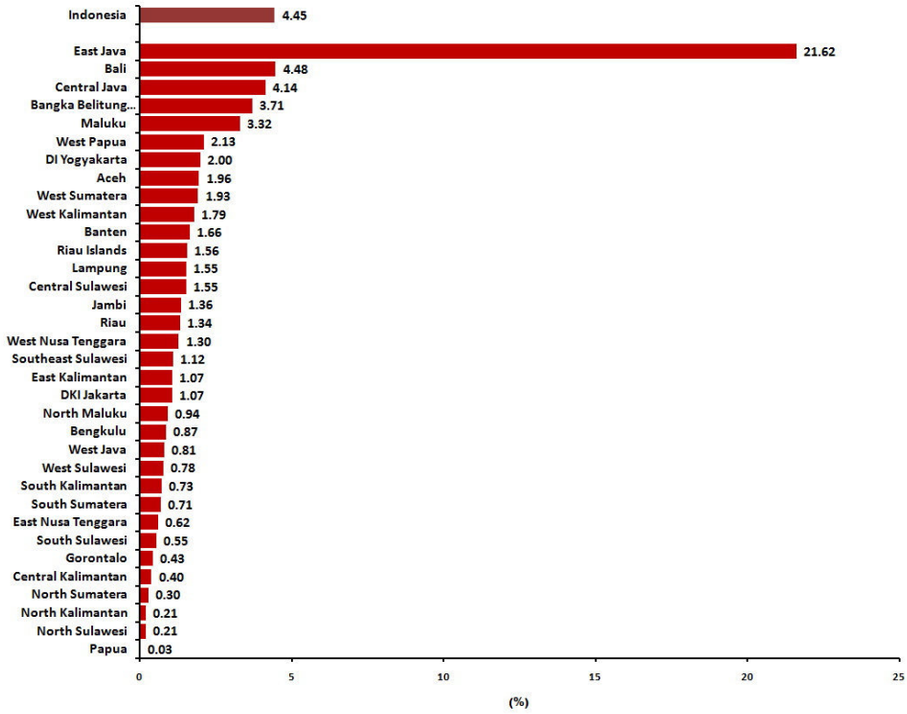
In an effort to control the tetanus infection, which is a risk factor for maternal and infant mortality, the government implements Tetanus Toxoid (TT) immunization program for Reproductive-Age Women (*WUS* or *Wanita Usia Subur*) and pregnant women. The Regulation of the Minister of Health Number 42 Year 2013 regarding the Implementation of Immunization mandates that both reproductive-age and pregnant women are the target population groups for advanced immunization. Advanced immunization is an activity that aims to advance further from the primary immunization administered to under-three-year-old infants (*Batita*), school-age children, and reproductive-age women, including pregnant women.

Reproductive-age women that are the target of TT immunization are women aged 15-49 who are either pregnant or not. Advanced immunization on *WUS* can be administered upon performing antenatal care. The TT immunization is then administered as many as 5 doses at specific intervals, beginning before or during pregnancy,which are useful for lifelong immunity. The interval and the period of protection of the TT immunization are as follows:

a. TT2 has a minimum interval of 4 weeks after TT1 with a 3-year protection period.
b. TT3 has a minimum interval of 6 months after TT 2 with a 5-year protection period.
c. TT4 has a minimum interval of 1 year after TT3 with a 10-year protection period.
d. TT5 has a minimum interval of 1 year after TT4 with a 25-year protection period.

Tetanus Toxoid immunization screening should be performed prior to the administration of the vaccine. It is no more necessary to administer if the screening results indicate that the reproductive-age women have had their TT5 immunization, proven by showing their KIA books, medical records, and/or cohort registration book. A group of pregnant women who have received TT2 up to TT5 can be marked to have had TT2 + immunization. The following figure shows the coverage of TT5 immunization for reproductive-age women and TT2+ immunization for pregnant women.

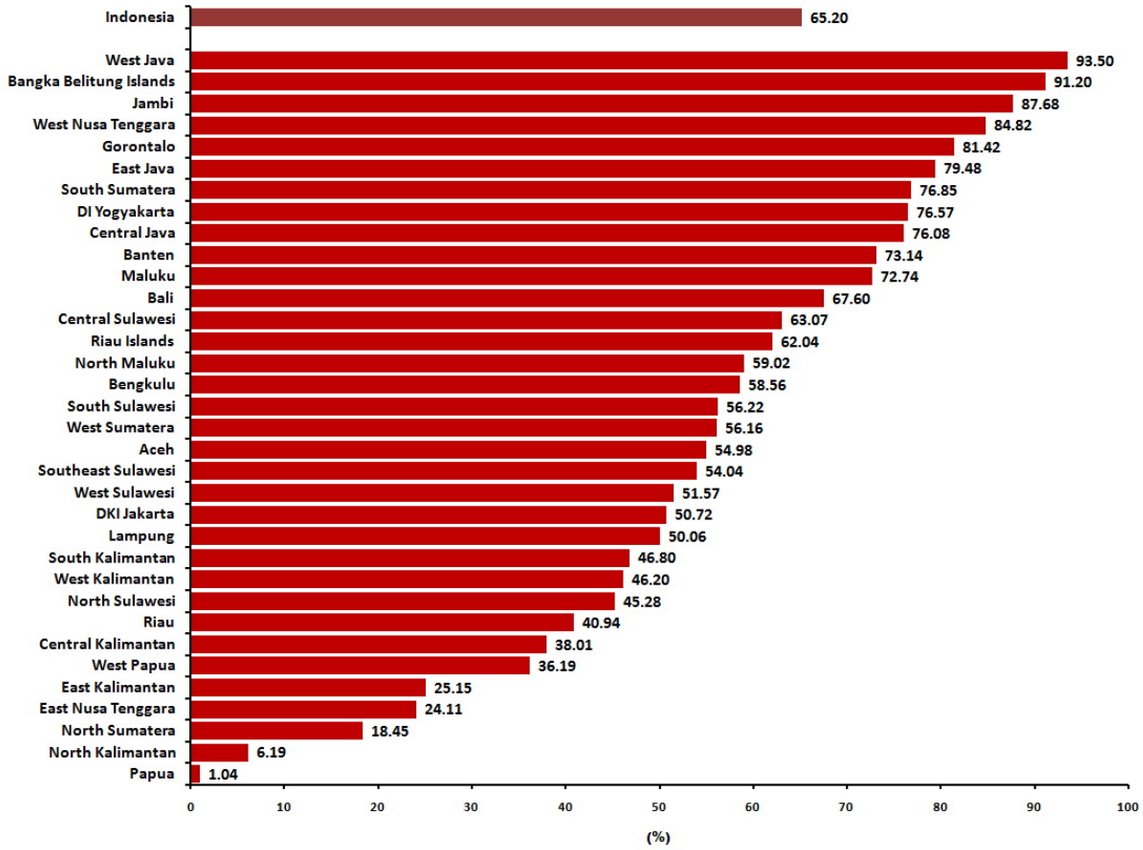
FIGURE 5.5
COVERAGE OF TT5 IMMUNIZATION FOR REPRODUCTIVE-AGE WOMEN IN INDONESIA, 2015



Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

In the figure above, we can see that the provinces of East Java, Bali and Central Java achieved the highest TT5 immunization coverage for WUS in Indonesia at 21.62%, 4.48% and 4.14% respectively. The provinces with the lowest achievement were Papua (0.03%), North Sulawesi (0.21%) and North Kalimantan (0.21%).

FIGURE 5.6
COVERAGE OF TT2+ IMMUNIZATION FOR PREGNANT WOMEN
IN INDONESIA, 2015



Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

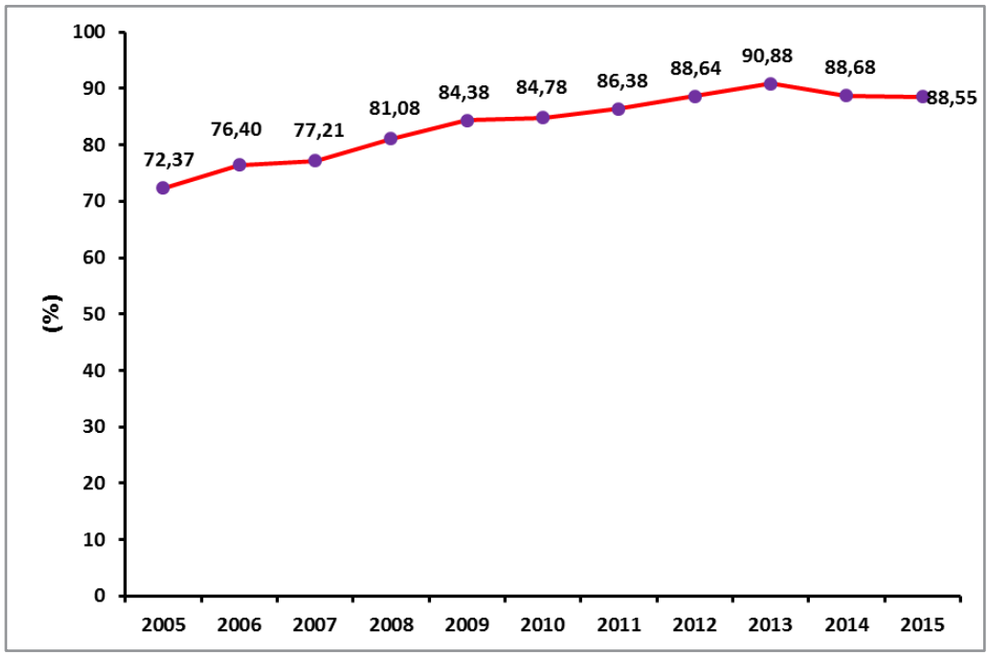
In the figure above, we can see that the provinces of West Java, Bangka Belitung Islands, and Jambi had the highest TT2+ immunization coverage for pregnant women in Indonesia at 93.5%, 91.2% and 87.68% respectively. The provinces with the lowest achievement were Papua (1.04%) and North Kalimantan (6.19%). More detailed information concerning TT immunization for reproductive-age women and pregnant women can be found in Annex 5.12 and Annex 5.13.

3. Delivery Healthcare

Other efforts to reduce maternal mortality rate and infant mortality rate is to encourage all deliveries to be assisted by skilled health personnel (obstetricians and gynecologists, general practitioners, and midwives) and to be performed in healthcare facilities. Assisted delivery refers to the process of delivery services starting from stage I to stage IV of labor. The success of this program is measured using indicators of percentage of

deliveries assisted by skilled health personnel (PN Coverage) and percentage of deliveries performed in healthcare facilities (PF Coverage).

FIGURE 5.7
COVERAGE OF DELIVERIES ASSISTED BY HEALTH PERSONNEL IN INDONESIA
2005 - 2015

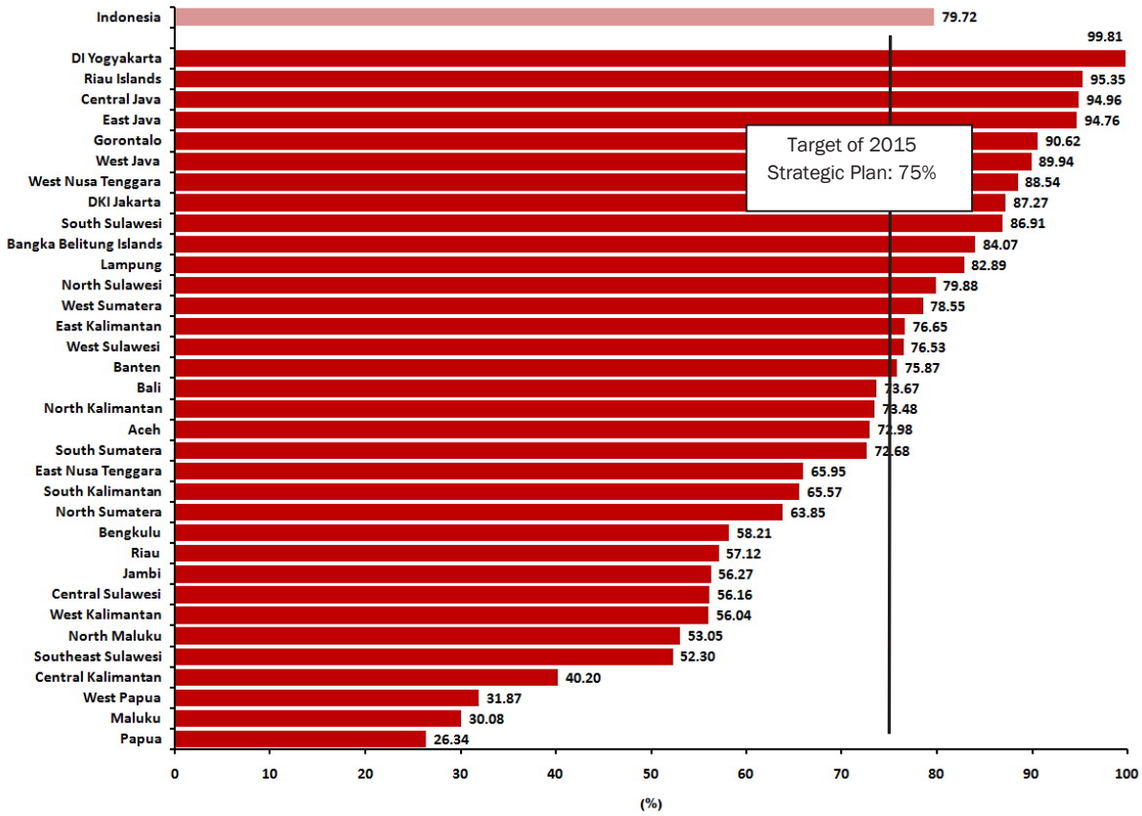


Source: Directorate General of Public Health, Ministry of Health RI, 2016

The percentage of deliveries assisted by health personnel in Indonesia showed an upward trend from 2005 to 2015. However, there was a decrease from 90.88% in 2013 to 88.55% in 2015. The policy of the Ministry of Health in the last decade emphasizes that all deliveries must be assisted by skilled health personnel in order to reduce maternal mortality rate and infant mortality rate. However, the fact that not all deliveries assisted by skilled health personnel were performed in healthcare facilities is considered to be one of the causes of the still high maternal mortality rate. Therefore starting 2015, safe delivery is defined as assisted delivery by health personnel in healthcare facilities. Hence, the Strategic Plan of the Ministry of Health in 2015-2019 determined assisted deliveries in healthcare facilities as one of the indicators of maternal health efforts, replacing the mere deliveries assisted by health personnel.

Below is an overview of the coverage of assisted deliveries in health facilities in 34 provinces in Indonesia in 2015.

FIGURE 5.8
COVERAGE OF ASSISTED DELIVERIES IN HEALTHCARE FACILITIES BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The figure above shows that 79.72% of pregnant women had their deliveries assisted by health personnel and carried out in healthcare facilities. Nationwide, the indicator had met the target of strategic plan set at 75%. However, there were 18 provinces (52.9%) who had not. The province of DI Yogyakarta had the highest achievements at 99.81% and Papua had the lowest at 26.34%. More detailed information concerning deliveries assisted by skilled health personnel inhealthcare facilities can be found in Annex 5.4.

The analysis of maternal mortality conducted by Directorate of Maternal Health in 2010 proved that maternal mortality is closely related to birth attendants and maternity facilities. Deliveries assisted by health personnel have proven to have contributed to the decline in the risk of maternal mortality. Similarly, deliveries performed in healthcare facilities have also increasingly reduced the said risk.

Therefore, the Ministry of Health remains consistent in implementing the policy that all deliveries should be assisted by skilled health personnel and are encouraged to be performed in healthcare facilities. The policy of Special Allocation Fund (*DAK* or *Dana Alokasi Khusus*) for Health Sector outlines that the construction of health centers comes with the construction of the official residence forthe health personnel. Similarly, the construction of *poskesdes* (Village Health Post) shall be intended to also serve asresidence for the village midwife. By providing

housing, health professionals including midwives will be on standby at their posts and can provide delivery assistance at any time.

For areas with difficult access, the Ministry of Health is developing Midwife and Traditional Birth Attendant Partnership program and Maternity Waiting Homes program. The traditional birth attendants are pursued to partner with midwives with clear rights and obligations. Antenatal care and delivery assistance are no longer attended by traditional birth attendants, but referred to midwives.

For pregnant women who do not have any midwives in their neighborhood or are away from healthcare facilities, then when the estimated due date is close she should be in an establishment near a healthcare facility, namely Maternity Waiting Home. The Home can either be specifically developed for that purpose through community empowerment or be merely the home of their relatives that lies adjacent to the healthcare facility.

4. Postpartum Healthcare

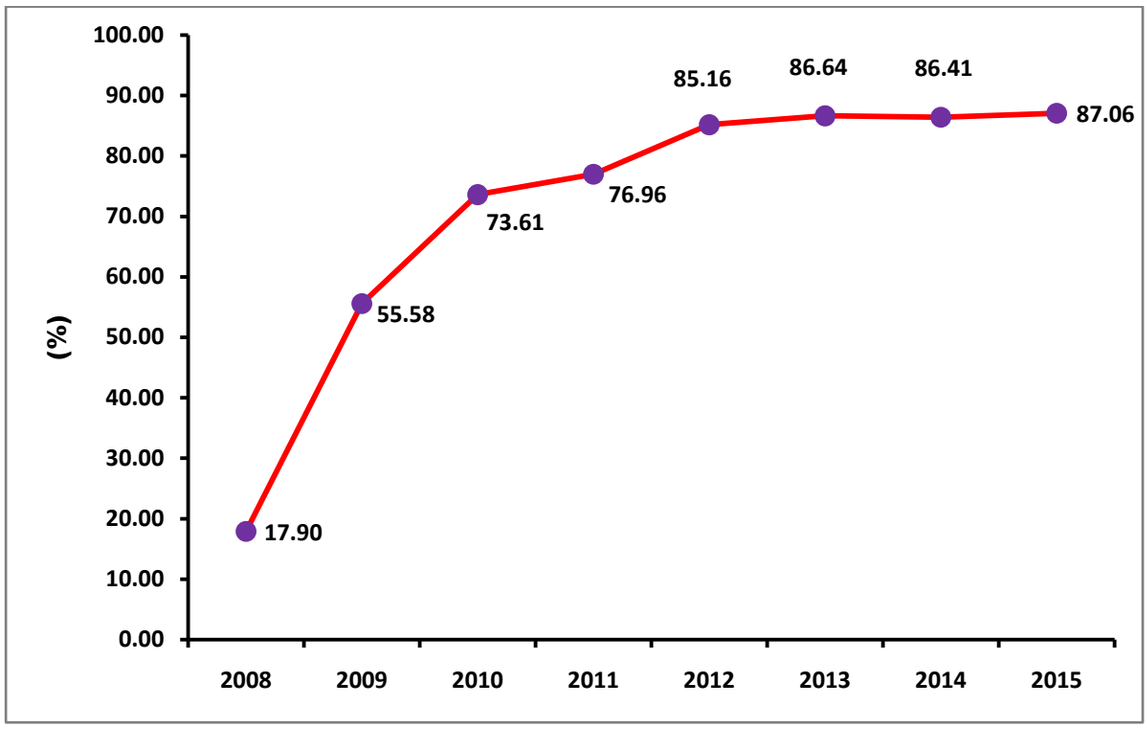
Postpartum healthcare refers to the standard healthcare provided for postpartum women, which is carried out at least three times in accordance with the recommended schedule, that is at the first six hours to the third day after the delivery, on the fourth day to the 28th day after the delivery, and on the 29th day to the 42nd day after the delivery. Postpartum period starts from the first six hours to the 42nd day after the delivery.

Types of postpartum healthcare provided include:

a) Examination for vital signs (blood pressure, pulse, respiration and temperature);
b) Examination of the apex of the uterus (*fundus uteri*);
c) Examination of lochia and other *per vaginam* fluids;
d) Examination of breasts and counselling for exclusive breast feeding;
e) Provision of information, education, and communication (*KIE* or *Komunikasi, Informasi, dan Edukasi*) of postpartum maternal health and neonatal health, including family planning;
f) Postpartum family planning services.

The following figure presents coverage of postpartum visits in Indonesia from 2008 to 2015.

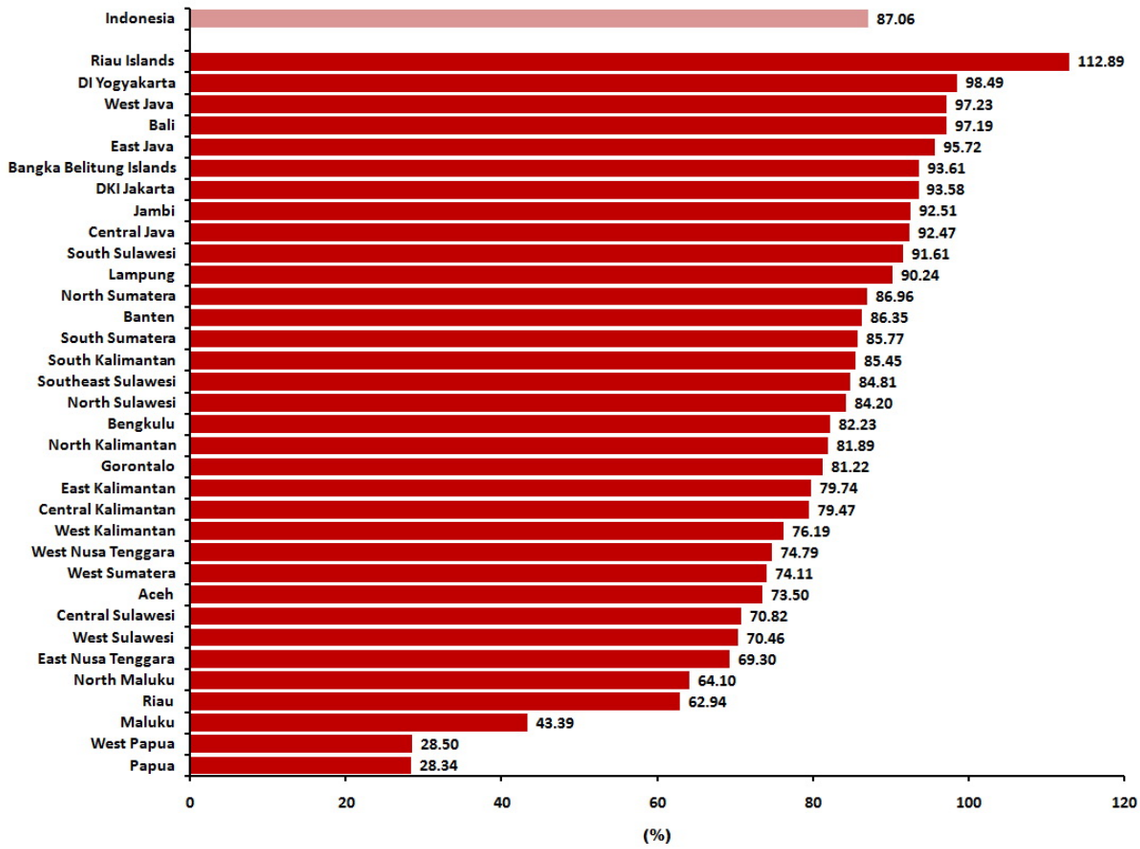
FIGURE 5.9
COVERAGE OF POSTPARTUM VISITS (KF3) IN INDONESIA, 2008 - 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Coverage of postpartum visits (KF3) in Indonesia in the last eight years has generally increased. The increasing achievement of KF3 indicator in the last eight years is a result of the various efforts made by the Government and society, including the private sector. Non-Permanent Employees (*PTT* or *Pegawai Tidak Tetap*) assignment program for physicians and midwives continue to be implemented. In addition, with the launch of Health Operational Support (*BOK* or *Bantuan Operasional Kesehatan*) in 2010, health centers, poskesdes (Village Health Post), and *posyandu* (Integrated Health Post) have since been better supported in intensifying the implementation of health efforts including postpartum healthcare. The said healthcare includes sweeping or home visits for those who miss their schedule to visit healthcare facilities. The achievement of postpartum visits by province in Indonesia can be found in the figure below.

FIGURE 5.10
COVERAGE OF POSTPARTUM VISITS (KF3) IN INDONESIA
BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Based on the figure above we can see that the province of Riau Islands has the highest achievement, followed by DI Yogyakarta at 98.49%, and West Java at 97.23%. The provinces with the lowest coverage of postpartum visits were Papua at 28.34%, followed by West Papua at 28.5%, and Maluku at 43.39%. More detailed data and information about postpartum healthcare in 2015 can be found in Annex 5.1.

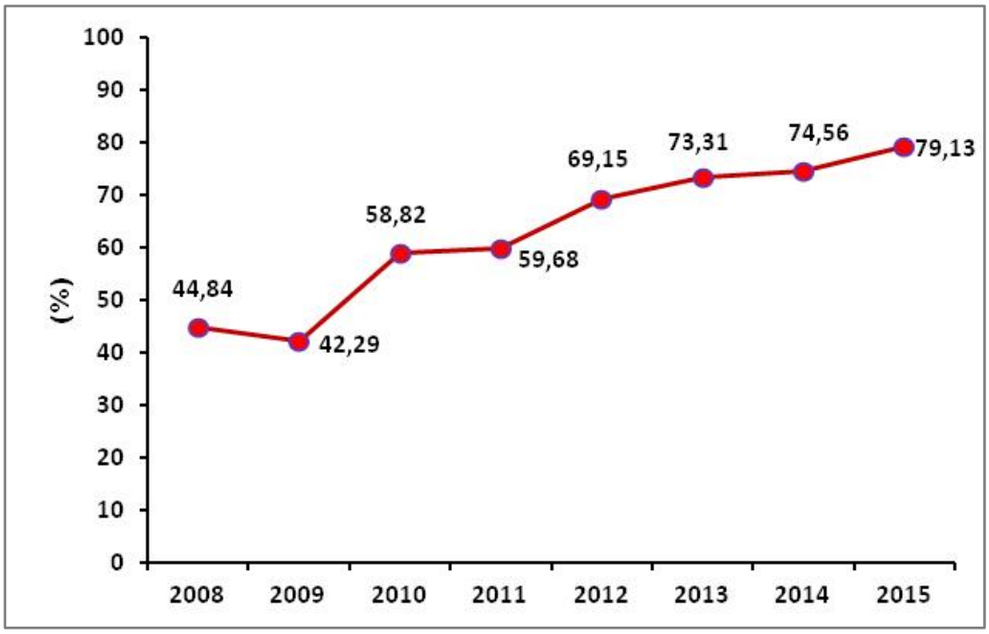
5. Obstetric Complications Care

Complications in pregnancy, delivery and postpartum are also one of the causes of maternal mortality and infant mortality. Obstetric complications refers to the pain experience in women during their pregnancy, delivery, and/or postpartum periods, and/or in fetus in the womb, either directly or indirectly, including infectious and non-infectious diseases that can be life-threatening for the mother and/or fetus. In an effort to reduce maternal mortality and infant mortality, obstetric complications care is implemented. Obstetric complications care refers to the healthcare provided for women during their pregnancy, delivery, and/or postpartum periods to provide definitive protection and assistance in accordance with the

standard which is performed by competent health personnelon both primary and referral levels.

The success of the program can be measured using the indicator of coverage of obstetric complications care (PK Coverage). This indicator measures the ability of the country in organizing professional healthcare to the mothers (during their pregnancy, delivery, and/or postpartum periods) with obstetric complications. The achievement of the indicator of obstetric complications care in Indonesia from 2008 to 2015 is presented in the following figure.

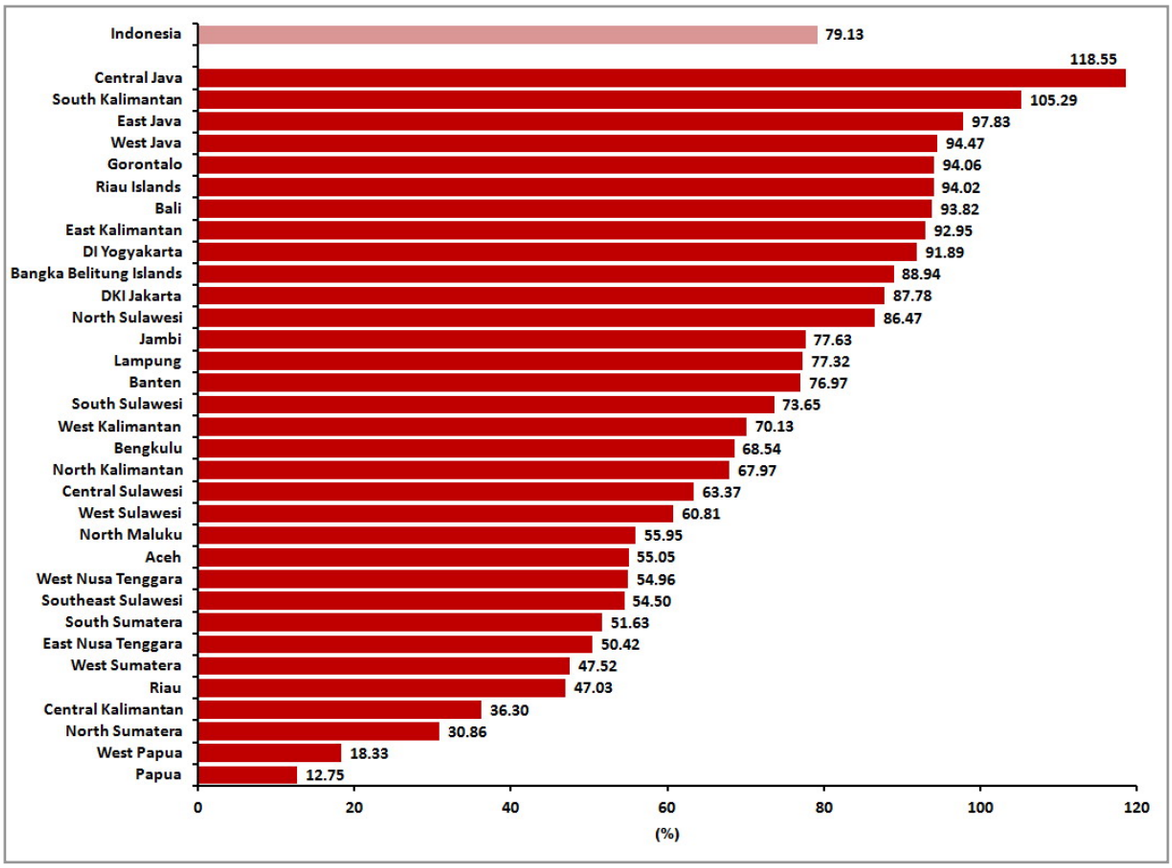
FIGURE 5.11
COVERAGE OF OBSTETRIC COMPLICATIONS CARE IN INDONESIA, 2008 - 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The figure above shows that in general, the coverage of obstetric complications care in Indonesia from 2008 to 2015 has an upward trend. The achievement in 2008 at 44.84% increased to 79.13% in 2015.

FIGURE 5.12
COVERAGE OF OBSTETRIC COMPLICATIONS CARE IN INDONESIA
BY PROVINCE, 2015

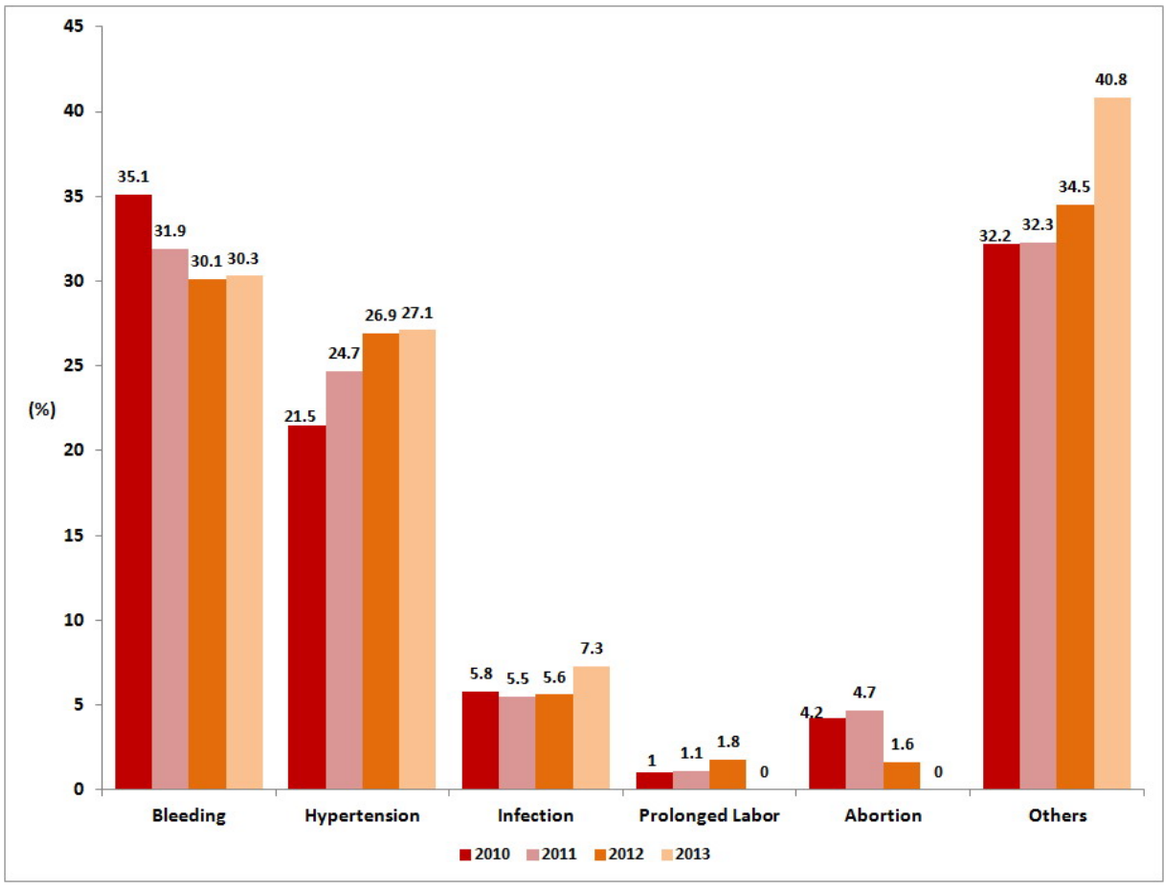


Source: Directorate General of Public Health, Ministry of Health RI, 2016

At the national level, the achievement of the indicator of obstetric complications care reached 79.13%. The overview of achievement among provinces showed Central Java had the highest percentage, followed by South Kalimantan and East Java. The lowest coverage, on the other hand, belonged to the province of Papua at 12.75%, followed by West Papua at 18.33% and North Sumatera at 30.86%. In this figure of inter-provincial achievement, we can see fairly high disparity between the provinces with the highest achievement and the provinces with the lowest achievement.

The five leading causes of maternal mortality are bleeding, hypertension in pregnancy (*HDK* or *Hipertensi dalam Kehamilan*), infection, prolonged/obstructed labor, and abortion. Maternal mortality in Indonesia is still dominated by the first three main causes: bleeding, HDK, and infection. However, the proportions have changed, as bleeding and infection tend to decrease while HDK continues to increase. More than 25% of maternal mortality in Indonesia in 2013 were caused by HDK. More details can be seen in Figure 5.13.

FIGURE 5.13
MATERNAL MORTALITY CAUSES IN INDONESIA, 2010 - 2013



Source: Directorate General of Public Health, Ministry of Health RI, 2016

It is predicted that 20% of pregnancies will experience complications. Untreated, they can cause death. However, most complications can be prevented and dealt with if: 1) the mother immediately seek help from health personnel; 2) the health personnel perform the appropriate handling procedures, including the use of partograph to monitor the progress of labor, and the implementation of active management of the third stage (*MAK* III or *Manajemen Aktif Kala* III) to prevent postpartum bleeding; 3) the health personnel are able to identify complications early; 4) the health personnel can provide first aid in the event of complications and stabilize the patients before making a referral; 5) the health facility has effective referral process; 6) the services in hospitals are swift and efficient.

A number of interventions can be done to reduce the morbidity and mortality of the mothers and newborns, such as: 1) improving antenatal services that can adequately detect and handle high-risk cases; 2) providing clean and safe delivery assistance performed by skilled health personnel, as well as postpartum healthcare; and 3) providing Basic Obstetric and Neonatal Emergency Care (*PONED* or *Pelayanan Emergensi Obstetrik dan Neonatal Dasar*) and Comprehensive Obstetric and Neonatal Emergency Care (*PONEK* or *Pelayanan Emergensi Obstetrik dan Neonatal Komprehensif*) which can be reached in a timely manner by those who need them.

Several breakthroughs in reducing Maternal Mortality Rate (AKI or *Angka Kematian Ibu*) and Infant Mortality Rate (*AKB* or *Angka Kematian Bayi*) in Indonesia have been implemented, one of which is Delivery Planning and Complications Prevention Program (*P4K* or *Program Perencanaan Persalinan dan Pencegahan Komplikasi*). The program emphasizes that the family and community are encouraged to care and to play their respective role in making early detection efforts, protecting pregnant women from possible health risks, as well as providing access to basic obstetric and neonatal emergency care (*PONED*) at the health center and comprehensive obstetric and neonatal emergency care (*PONEK*) at the hospital. In the implementation, *P4K* is one element of Alert Village. *P4K* was introduced by the Minister of Health in 2007. The implementation of *P4K* in the villages must ensure that it assists the families in making a good delivery planning and improving the family's alertness in the face of warning signs of pregnancy, delivery, and postpartum so they can take appropriate action.

Health facilities will also need to perform Maternal Perinatal Audit (*AMP* or *Audit Maternal Perinatal*), which is an effort in the assessment of implementation and improvement of healthcare quality for mothers and newborns. The audit is carried out by looking into maternal or neonatal mortality cases from the community to the healthcare facilities. One of the results obtained from *AMP* is that we learn about the obstacles that arise in the efforts to save the mother during maternal and neonatal emergency. The study may also produce a recommendation to intervene in improving the quality of maternal and infant healthcare in the future. Data and information about obstetric complications care by province can be found in Annex 5.3.

6. Contraceptive Services

The Government Regulation of the Republic of Indonesia Number 87 Year 2014 concerning Population Growth and Family Development, Family Planning, and Family Information System, states that the family planning program (*KB* or *Keluarga Berencana*) refers to the efforts in controlling childbirth, regulating the distance and the ideal age to give birth, as well as controlling pregnancy through promotion, protection, and assistance in accordance with the reproduction rights to create quality family.

Family planning program is one strategy to reduce maternal mortality, especially mothers with 4T conditions; too young to give birth (under 20 years), too frequent to give birth, too short intervals between deliveries, and too old to give birth (over 35 years). In addition, KB program also aims to improve the quality of the family so that it will promote a sense of security, peace, and hope for a better future in the realization of the family welfare.

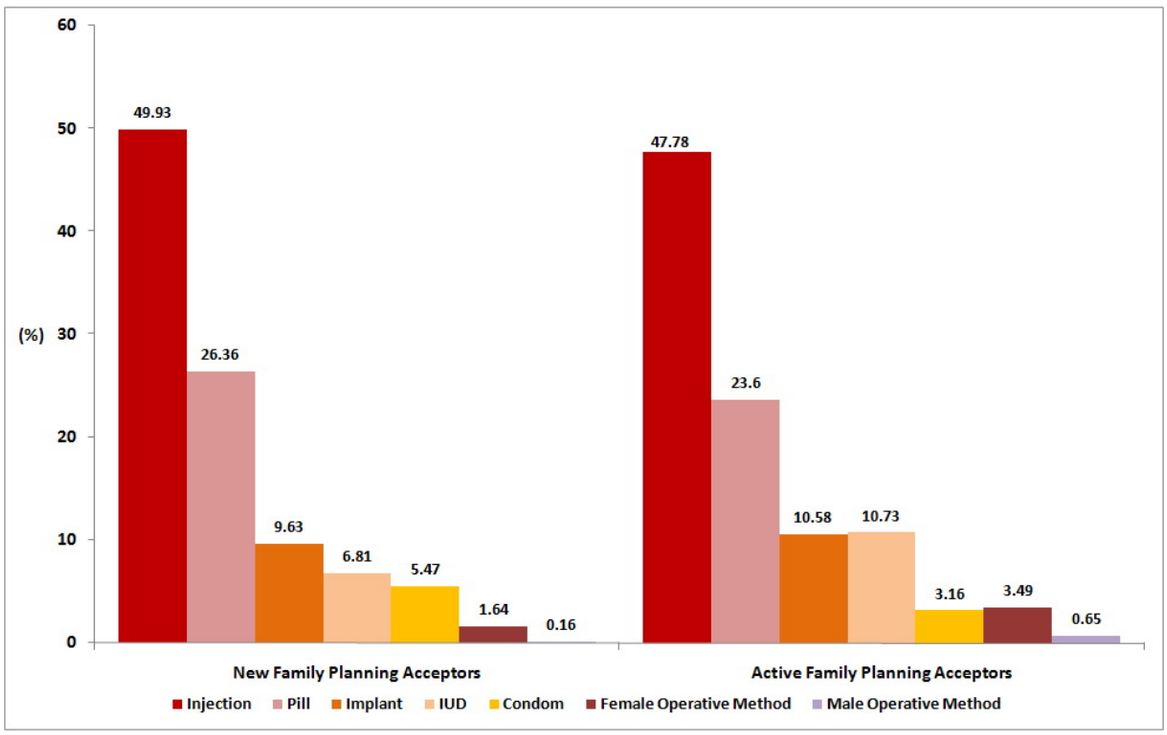
Family planning program is also one of the most effective ways to improve the resilience of the family, the health, and the safety of the mothers, children, and women. Family planning services provide information, education, and methods for men and women to be able to plan when to have children, how many children to have, how many years the age gap between children, as well as when to stop having children.

During KB counseling, Reproductive-Age Couples (*PUS* or *Pasangan Usia Subur*) can determine the choice of contraception that is suitable for their conditions and needs based on the information they have understood, including the advantages and disadvantages as well as the risks, from the health personnel. Among the purposes of implementing *KB* is to regulate the number of births or evento give distance between deliveries. Family Planning

program targets *PUS*, focusing more on *WUS* (Reproductive-Age Women) who are in the age range of 15-49 years.

The target of *KB* program is *PUS*. Reproductive-Age Couples or *PUS* refers to the couples engaged in a legitimate marriage, in which the wife is aged between 15 to 49 years old. Active *KB* acceptors refers to *PUS* who are currently using one contraceptive without being interrupted by pregnancy. New *KB* acceptors refers to *PUS* who have just had their first contraceptive or *PUS* who resume their contraceptive after delivery/miscarriage.

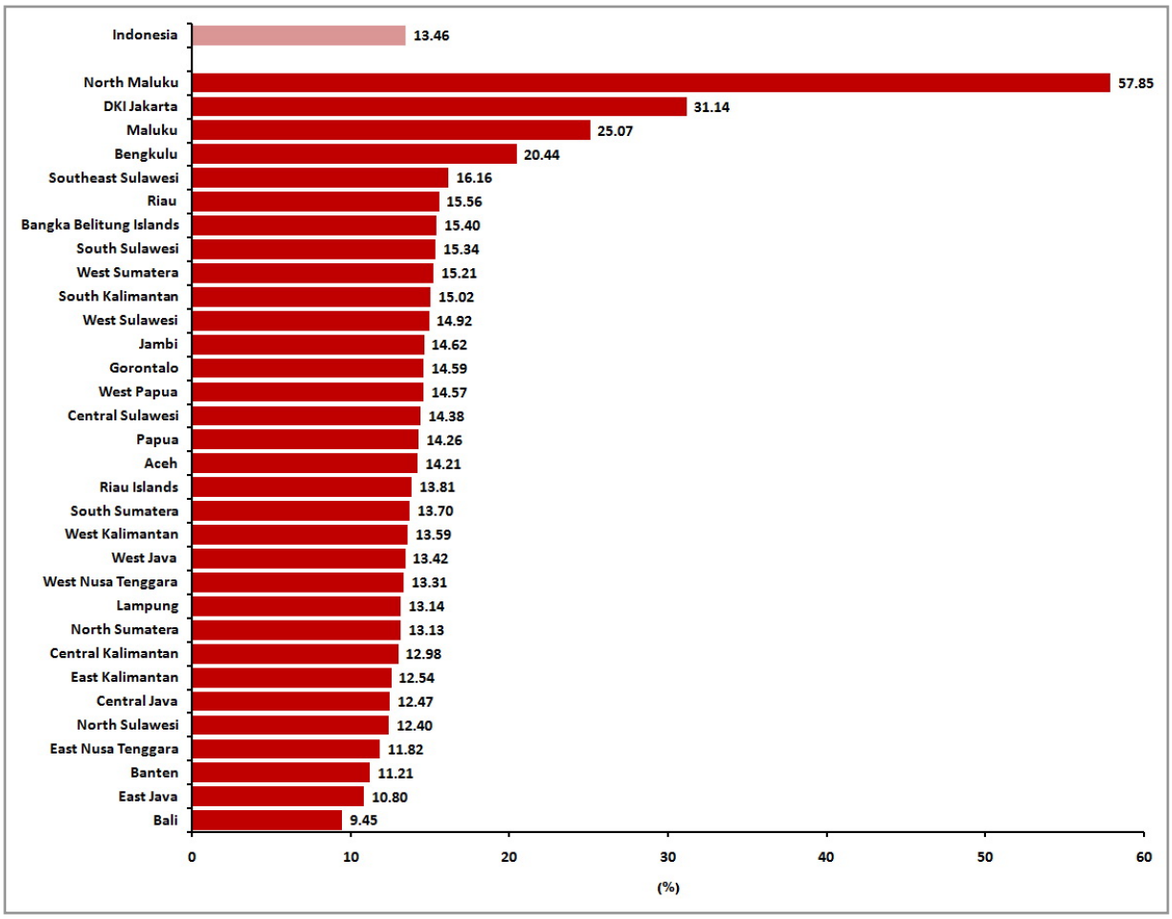
FIGURE 5.14
COVERAGE OF NEW AND ACTIVE FAMILY PLANNING ACCEPTORS BY CONTRACEPTION METHOD, 2015



Source: National Population and Family Planning Board, 2016

New *KB* acceptors and active *KB* acceptors showed a similar pattern in the choice of contraceptives as shown in the figure above. Most acceptors, either new or active, chose injection and pill for contraceptives. Both types of contraceptives are considered to be readily available and used by reproductive-age couples. Nevertheless, the effectiveness of injection and pill over other types of contraceptives should be noted in the efforts to control pregnancy.

FIGURE 5.15
COVERAGE OF NEW FAMILY PLANNING ACCEPTORS IN INDONESIA, 2015

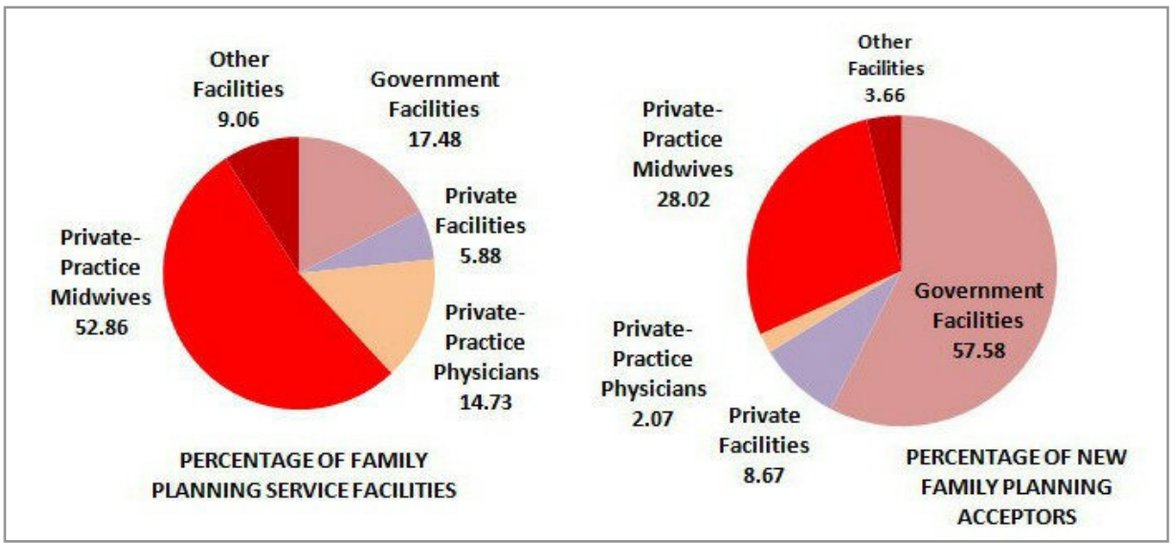


Source: National Population and Family Planning Board, 2016

The percentage of new family planning acceptors to reproductive-age couples in Indonesia in 2015 reached 13.46%. This figure is lower than the achievement in 2014 which reached 16.51%. Three provinces had the highest percentage, namely North Maluku at 57.85%, DKI Jakarta at 31.14%, and Maluku at 25.07%. The lowest achievements, on the other hand, belonged to the provinces of Bali at 9.45%, East Java at 10.8%, and Banten at 11.21%.

Based on the Law of the Republic of Indonesia Number 36 Year 2009 concerning Health, the government must ensure the availability of information and reproductive healthcare facilities that are safe, quality, and affordable to the public, including family planning. Health services in family planning are intended to regulate pregnancy for PUS to create healthy and smart future generation. Reproductive-Age Couples can obtain contraceptive services in health facilities serving the family planning program. An overview of KB service facilities in Indonesia can be seen in Figure 5.16 below.

FIGURE 5.16
PERCENTAGE OF FAMILY PLANNING SERVICE FACILITIES IN INDONESIA
AND PERCENTAGE OF NEW FAMILY PLANNING ACCEPTORS BY TYPE OF SERVICES
IN 2015



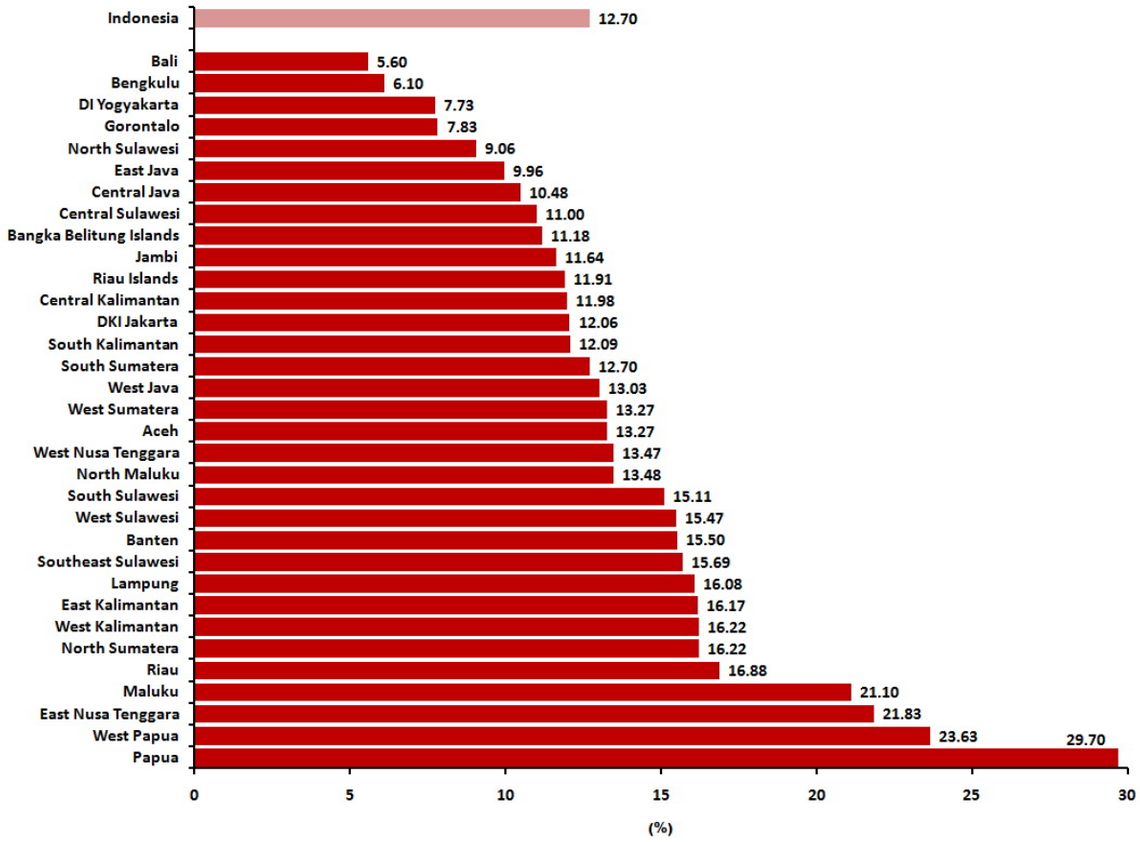
Source: National Population and Family Planning Board, 2016

In the picture above, it can be seen that with respect to the input or the existing family planning service facilities, the highest proportion came from private-practice midwives, with 52.86%, while government facilities was only at 17.48%. The Government through National Population and Family Planning Board (*BKKBN* or *Badan Kependudukan dan Keluarga Berencana Nasional*) and the Ministry of Health is responsible for all types of family planning service facilities, not merely to those owned by the government. This is one of the challenges faced in the implementation of family planning programs.

Despite having smaller proportion than that of private-practice midwives, government facilities have the highest preference (57.58%) for new family planning acceptors to get their *KB* services. With such high level of utilization from the public, this could be an opportunity for *BKKBN* and the Ministry of Health to apply better control in the implementation of the family planning program.

Of all reproductive-age couples targeted for family planning programs, there are some who decided not to use the program for various reasons, among others: they want to postpone having children or they do not want to have anymore child. This reproductive-age couples group is referred to as an unmet need. The percentage of this unmet need group in Indonesia amounted to 12.7%. Of all reproductive-age couples who decided not to accept family planning programs, as much as 6.15% expressed that they wanted to postpone childbearing, and as much as 6.55% stated that they wanted to terminate childbearing. Total number of unmet need in 2015 decreased compared to that of 2014, which amounted to 14.87%.

FIGURE 5.17
PERCENTAGE OF REPRODUCTIVE-AGE COUPLES
NOT PARTICIPATING IN FAMILY PLANNING (UNMET NEED)
IN INDONESIA, 2015



Source: National Population and Family Planning Board, 2016

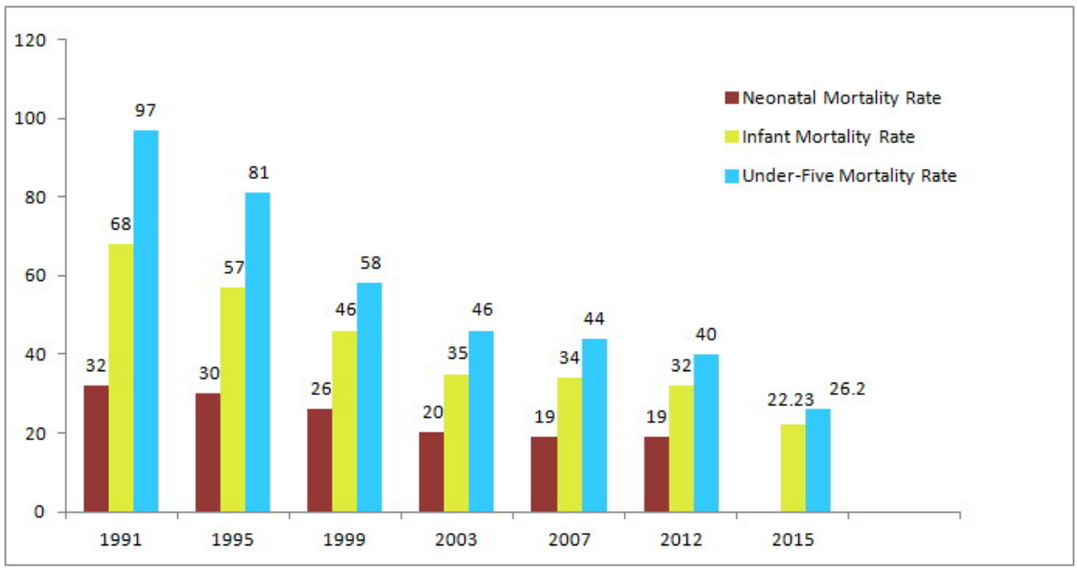
A low number of unmet need can indicate the success of the organization of the family planning program. The province of Bali had the lowest percentage of unmet need with 5.6%, followed by Bengkulu with 6.1%, and DI Yogyakarta with 7.73%. The province of Papua, on the other hand, had the highest number of unmet need with 29.7%, followed by West Papua with 23.63%, and East Nusa Tenggara with 21.83%. More detailed overview of the implementation of the family planning program in Indonesia by province can be found in Annex 5.5 to Annex 5.11.

B.CHILD HEALTH

Child healthcare efforts are aimed at preparing future generations with good health, intelligence, and quality as well as reducing child mortality. Child healthcare efforts start from the fetal development, on to the delivery process, the postnatal period, up to the age of eighteen.

Child health effort sare expected to reduce child mortality. The indicators of mortality associated with child are Neonatal Mortality Rate (*AKN* or *Angka Kematian Neonatal*), Infant Mortality Rate (*AKB* or *Angka Kematian Bayi*) and the Under-Five Mortality Rate (*AKABA* or *Angka Kematian Balita*). It is becoming important to focus on the efforts to reduce neonatal mortality rate (0-28 days) since it contributes to 59% of infant mortality rate. Based on the results of 2012 SDKI, the AKN in 2012 amounted to 19 per 1,000 live births. This figure is similar to the *AKN* surveyed in 2007 *SDKI* and is only 1 point lower compared with that in 2002-2003 with 20 per 1,000 live births.

FIGURE 5.18
TREND IN NEONATAL, INFANT AND UNDER-FIVE MORTALITY RATES



Source: *SDKI* in 1991-2012, SUPAS in 2015

The result of 2015 *SUPAS* showed the *AKB* at 22.23 per 1,000 live births, which means the 2015 *MDG* target with 23 per 1,000 live births had been achieved. Similarly, the *AKABA* as the result of *SUPAS* in 2015 reached 26.29 per 1,000 live births, which means it also met the 2015 *MDG* target with 32 per 1,000 live births.

The following data and information describes various child health indicators which include treatment for newborns with complications, neonatal healthcare, basic immunization, healthcare to students of elementary school/equivalent, and youth healthcare services.

1. Neonatal Healthcare

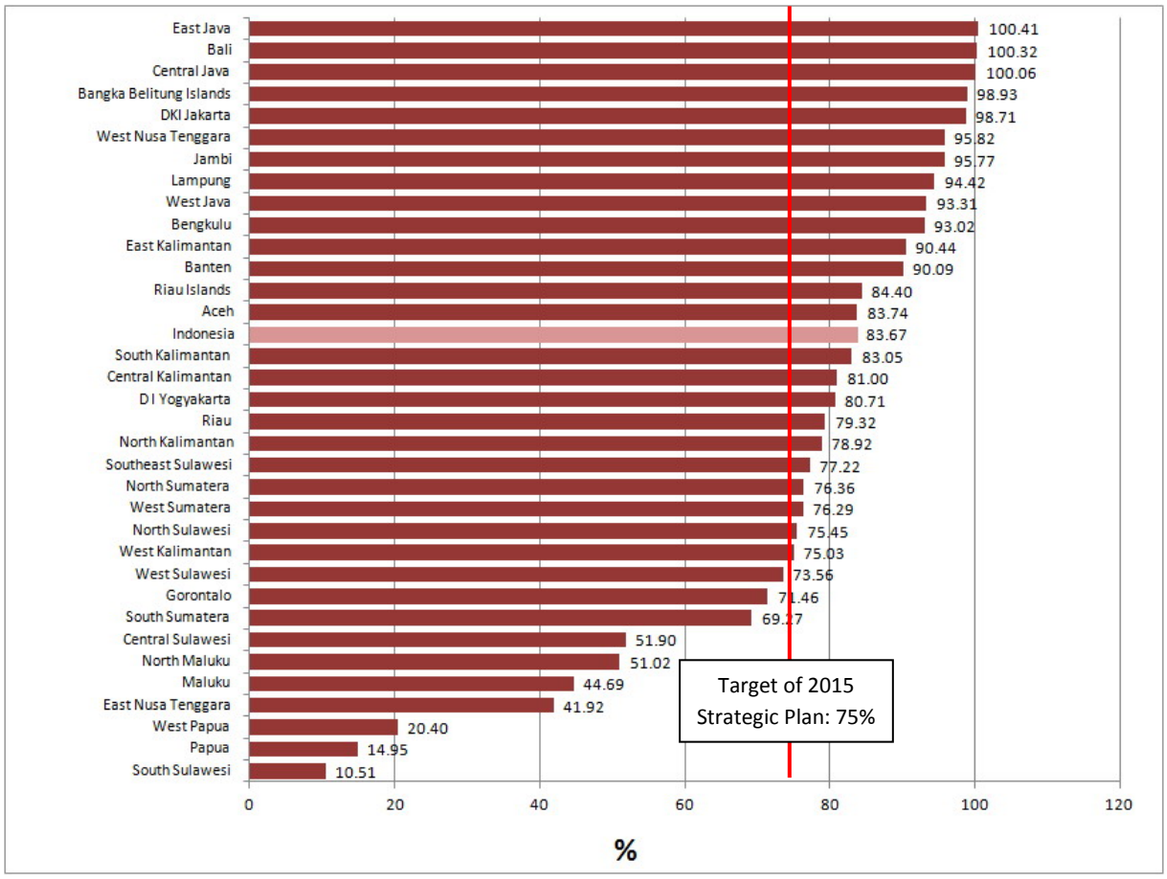
Neonate refers to a newborn infant aged up to 28 days. During the period, a huge process is taking place which is different from that in the womb, and maturation occurs in nearly all organ systems. Infants aged less than one month have the highest risk, since many types of health problems can arise, which can be fatal without proper treatment. Several attempts were made to control the health risk in this group, among others ensuring that

deliveries can be attended by health personnel in health facilities and ensuring the availability of standard healthcare on neonatal visits.

Coverage of First Neonatal Visits (KN1) is an indicator that describes health efforts undertaken to reduce the risk of death in the neonatal period, which is 6-48 hours after delivery. The visits in question includeusing the approach of Integrated Management of Young Under-Fives (*MTBM* or *Manajemen Terpadu Balita Muda*) which covers counseling for neonatal care and exclusive breastfeeding, as well as administering vitamin K1 injection, and Hepatitis B 0 (HB 0) injection if not already given.

During 2010-2014, the KN1 indicator always achieved the Strategic Plan target with 3.2% average increase in coverage from 2010 to 2014. At the end of 2014 the KN1 coverage reached 97%. The KN1 target in 2015 was set at 75%, lower than the previous year, due to changes in the operational definition of KN1 indicator. Previously, KN1 coverage constituted KN1 access indicator. Later in the 2015 Strategic Plan, the definition changed into the improvement on the quality of neonatal visits.

FIGURE 5.19
COVERAGE OF FIRST NEONATAL VISITS (KN1) BY PROVINCE, 2015



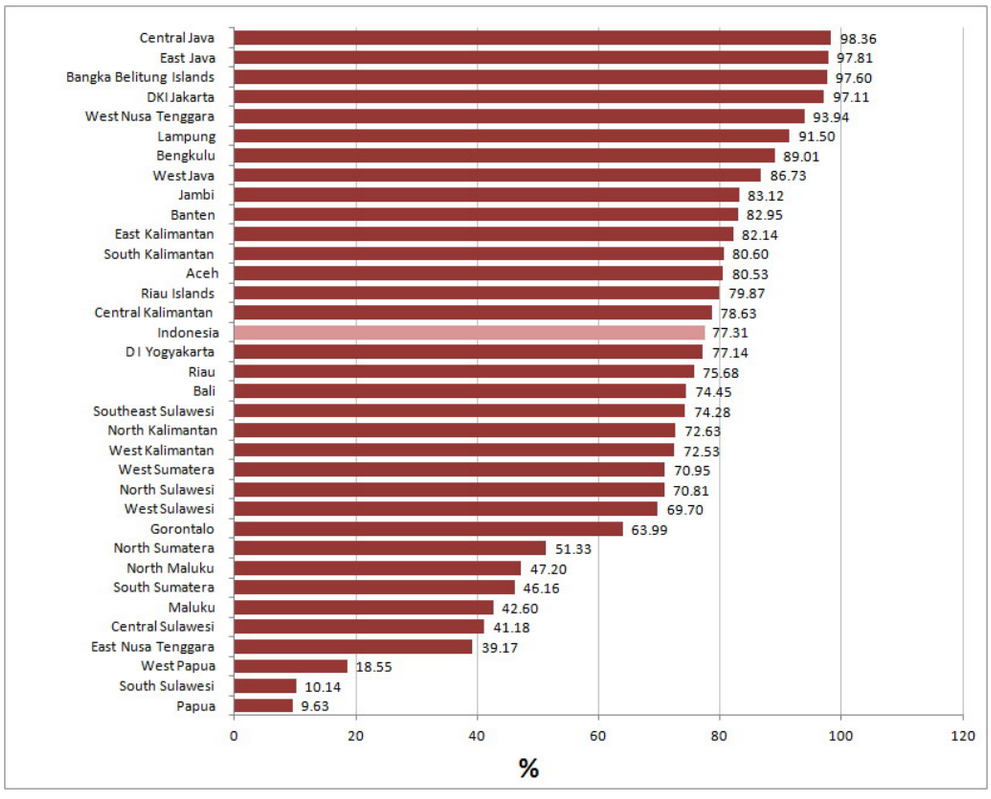
Source: Directorate General of Public Health, Ministry of Health RI, 2016

First neonatal visit (KN1) refers to the coverage of neonatal healthcare (six hours old to fortyt-eight hours old) in one working area in a certain period which is handled according to standard by skilled health personnel in all healthcare facilities. The services provided during the visit include inspection in accordance with MTBM standard and counseling for neonatal care, which covers exclusive breast feeding and umbilical cord stump care. On the first neonatal visit (KN1), newborns receive vitamin K1 injection and Hepatitis B 0 (HB 0) immunization (if not already given at birth). The coverage of the first neonatal visits indicator by province can be seen in Figure 5.19.

The KN1 achievement in Indonesia in 2015 amounted to 83.67%. The figure showed an accomplishment of the target of 2015 Strategic Plan, which was set to 75%. As many as 24 provinces met the target.

Besides KN1, another indicator that reflects the coverage of neonatal healthcare is Complete Neonatal Visit (Complete KN) which requires that every newborn receives Neonatal Visit services at least three times according to the standard in one working area during the period of one year. An overview of the coverage of complete KN by province in Indonesia can be found in the following figure.

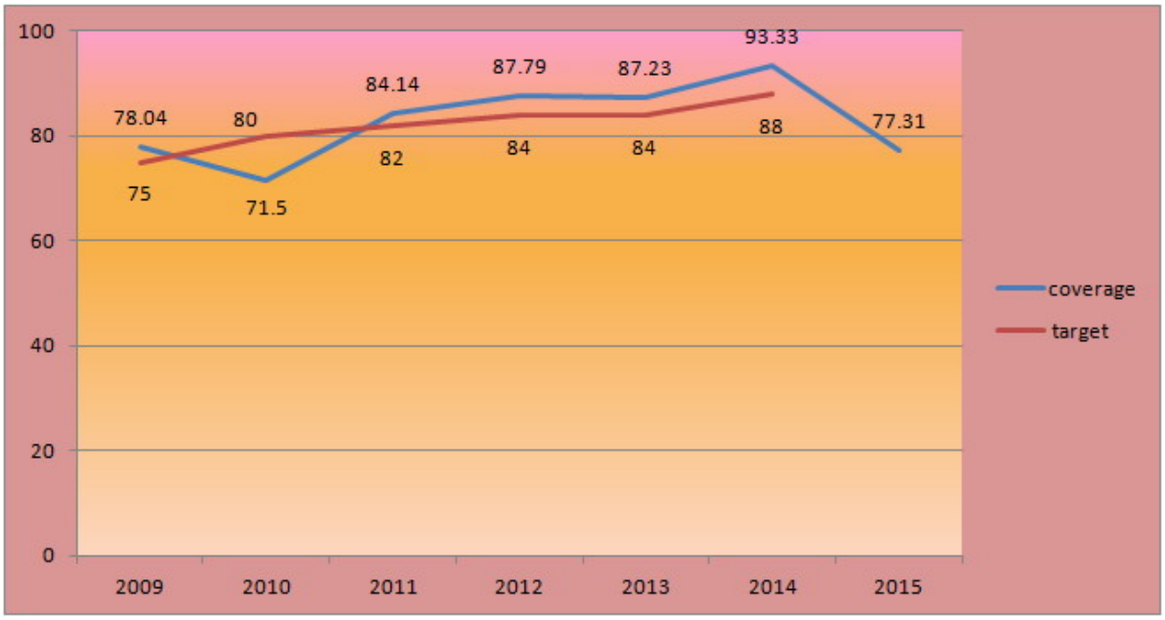
FIGURE 5.20
COVERAGE OF COMPLETE NEONATAL VISITS (COMPLETE KN) BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The achievement of complete KN in Indonesia in 2015 reached 77.31%. The figure above shows that the achievement of complete KN indicator in Indonesia was sufficiently good, as shown by quite high achievement in mostprovinces. The highest achievement belonged to the province of Central Java, followed by East Java, and Bangka Belitung Islands, while the provinces with the lowest achievement were Papua and South Sulawesi. The following figure shows the coverage of complete KN from 2009 to 2015.

FIGURE 5.21
COVERAGE OF COMPLETE NEONATAL VISITS IN INDONESIA, 2009-2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

During the last seven-year period the coverage of complete KN showed an increasing trend from 78.04% in 2009 to 93.33% in 2014. However, in 2015 it decreased to 77.31%. Just like the case with the coverage of KN1, the coverage of complete KN declined due to changes in the operational definition of KN1 indicator which previously focused more on access and then in the 2015 Strategic Plan turned into the improvement on the quality of neonatal visits. Further information on complete neonatal visits can be seen in Annex 5.14.

2. Neonatal Complications Care

Neonates with complications refers to newborns with diseases or disorders which can cause disability or death, such as asphyxia, jaundice, hypothermia, neonatal tetanus, infection/sepsis, birth trauma, low birth weight, respiratory distress syndrome, and congenital abnormalities as well as those classified as yellow and red on examination using MTBM.

The neonatal complications that are the leading cause of infant mortalityare asphyxia, low birth weight, and infections (Riskesdas, 2007). These complications can actually be

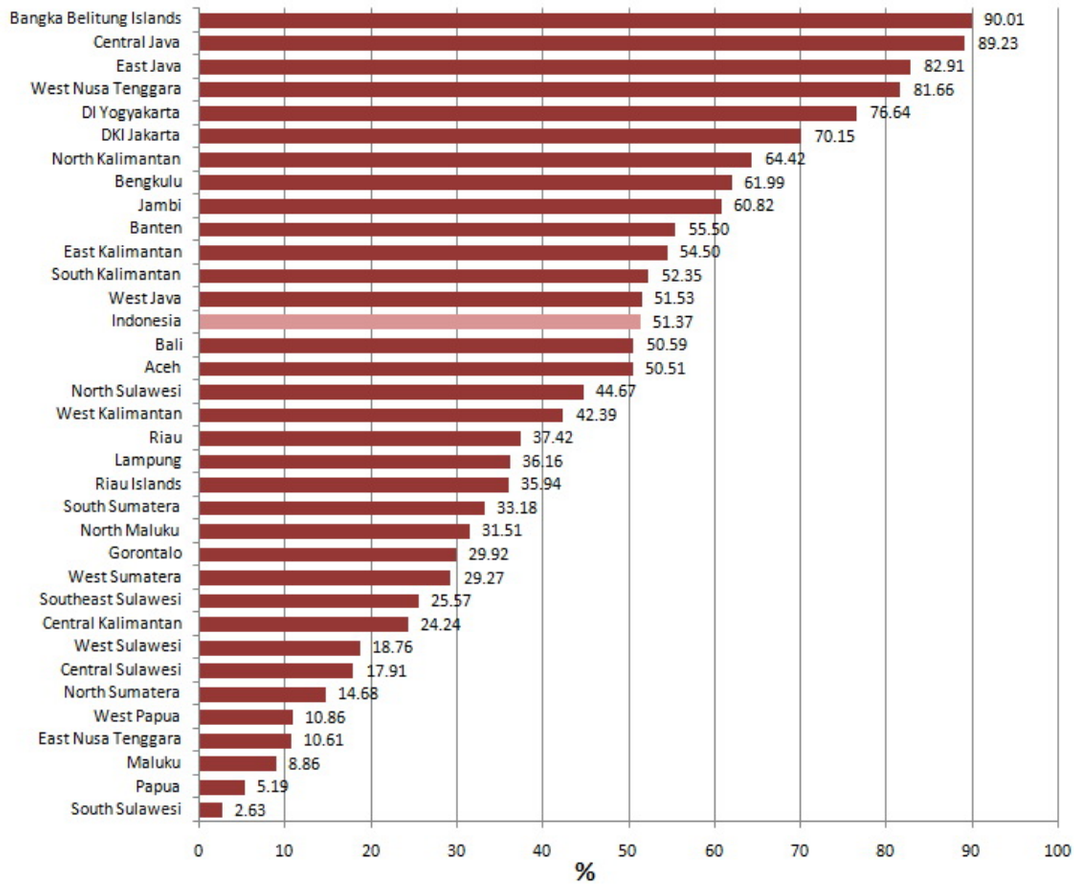
prevented and dealt with, but are constrained by access to healthcare, skills of the health personnel, socioeconomic status, a referral system that has not functioned well, late detection of the risk factors, and poor awareness from the parents to seek medical help.

Neonatal complications care refers to treatment provided for ill neonates and/or neonates with congenital abnormalities or complications/emergencies, the service of which is performed according to standards administered by skilled health personnel (physicians, midwives or nurses) who are well-trained to do their job either in a patient's house, basic healthcare facilities or referral healthcare facilities. Standard services refers to the approaches applied in, among others, Integrated Management of Young Under-Fives, Neonatal Asphyxial Management, Management of Low Birth Weight Babies, essential neonatal care guidelines at primary healthcare level, *PONED, PONEK* or other standard operational services.

The achievement of neonatal complications care decreased, from 59.68% in 2014 to 51.37% in 2015. In addition to declining performance, there were still a fairly large disparities between provinces. In 2015 the highest achievement was obtained by the province of Bangka Belitung Islands with 90.01%, followed by Central Java with 89.23%, and East Java with 82.91%. The provinces with the lowest achievement were South Sulawesi (2.63%), Papua (5.19%) and Maluku (8.86%). More detailed information on neonatal complications care by province can be found in Annex 5.15.

The following figure presents coverage of neonatal complication care by province in 2015.

FIGURE 5.22
COVERAGE OF NEONATAL COMPLICATIONS CARE BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

3. Immunization

Every year more than 1.4 million children in the world die from diseases that can be prevented by immunization. Immunization is an effort to actively induce/increase one's immunity against a disease, so if s/he should be exposed to the disease s/he will not fall sick or may only suffer mild illness. Some infectious diseases categorized Preventable Diseases by Immunization (*PD3I* or *Penyakit yang Dapat Dicegah dengan Imunisasi*) include Tuberculosis, Diphtheria, Tetanus, Hepatitis B, Pertussis, Measles, Polio, Meningitis, and Pneumonia. Children who have been immunized are protected from those dangerous diseases, which can cause disability or death.

The process of a disease begins when the viruses/bacteria/protozoa/fungi get into the body. Every living creature that enters the human body will be considered a foreign object, also called antigen, by our body. Naturally, the immune system will produce antibodies to immobilize the antigen. The first time our antibody interacts with the antigen, the response will not be too strong. This is because our antibody has not recognized the antigen. On the

second interaction and so forth, the immune system has registered the antigen, hence it creates more antibody in a faster fashion.

The natural process of formation of antibodies against antigens is called natural immunization. Immunization through vaccination, on the other hand, is an effort to stimulate the immune system to produce antibodies in the fight against diseases by disabling the attenuated antigens from the vaccines.

The immunization program is an effort to protect the population against certain diseases. The program is administered to those considered vulnerable of contracting communicable diseases, namely infants, under-fives, reproductive-age women, and pregnant women.

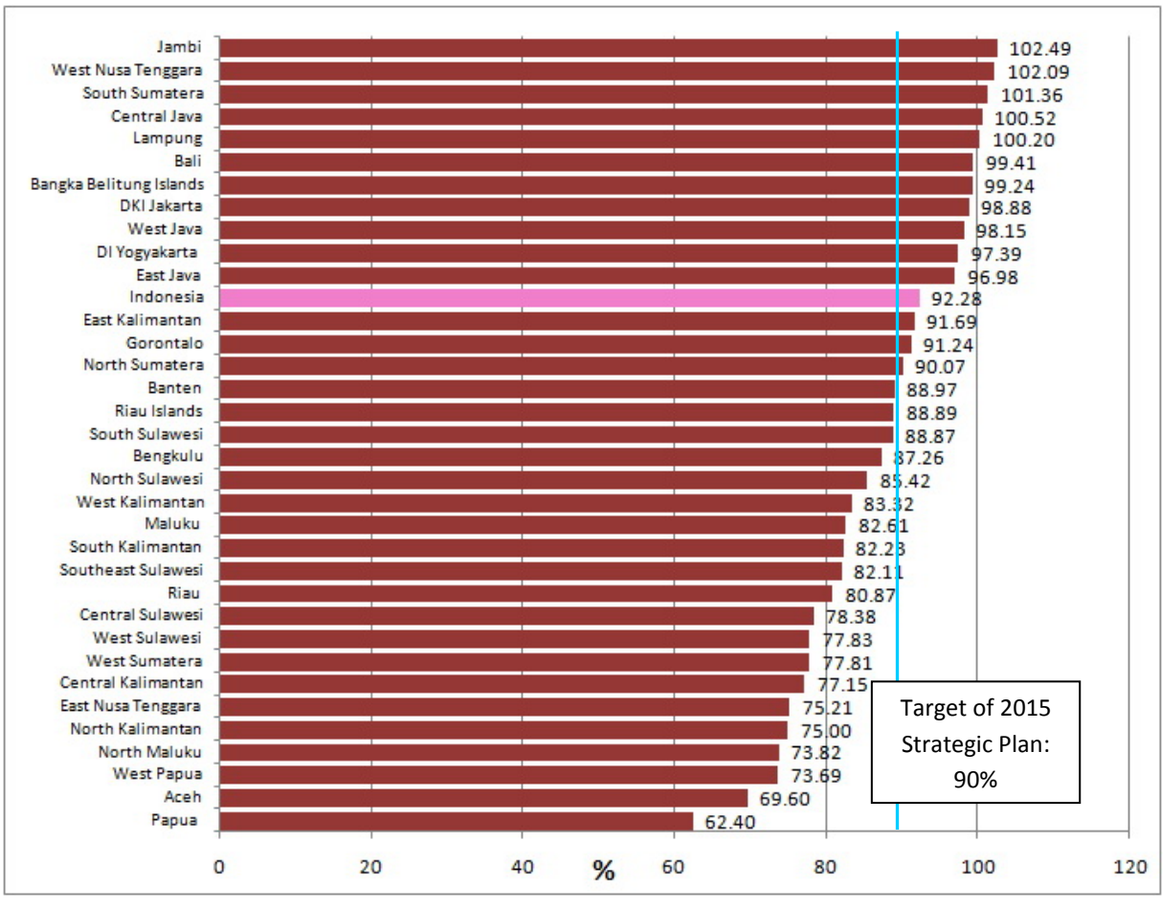
a. Basic Immunization on Infants

Immunizations protect children against some Preventable Diseases by Immunization (PD3I). A child is immunized with a vaccine by injecting it in specific locations or dripping it through the mouth.

As one of target groups for immunization programs, each baby must receive complete basic immunization comprising one dose of BCG, three doses of DPT-HB and/or DPT-HB-Hib, 4 doses of Polio, and one dose of Measles. Of all those mandatory basic vaccines, measles gets more attention due to the global commitment of this country to maintain the evenly coverage of measles immunization as high as 90%. This corresponds to the reality that measles is one of the leading causes of infant mortality. Thus the prevention of measles plays a significant role in the decline in under-five mortality rate.

Indonesia had slightly lower coverage of measles immunization than that in 2014, amounting to 92.3% in 2015. There were fourteen provinces that successfully achieved the target of 90% as shown in Figure 5.23 below.

FIGURE 5.23
PERCENTAGE OF COVERAGE OF MEASLES IMMUNIZATION ON INFANTS
BY PROVINCE, 2015



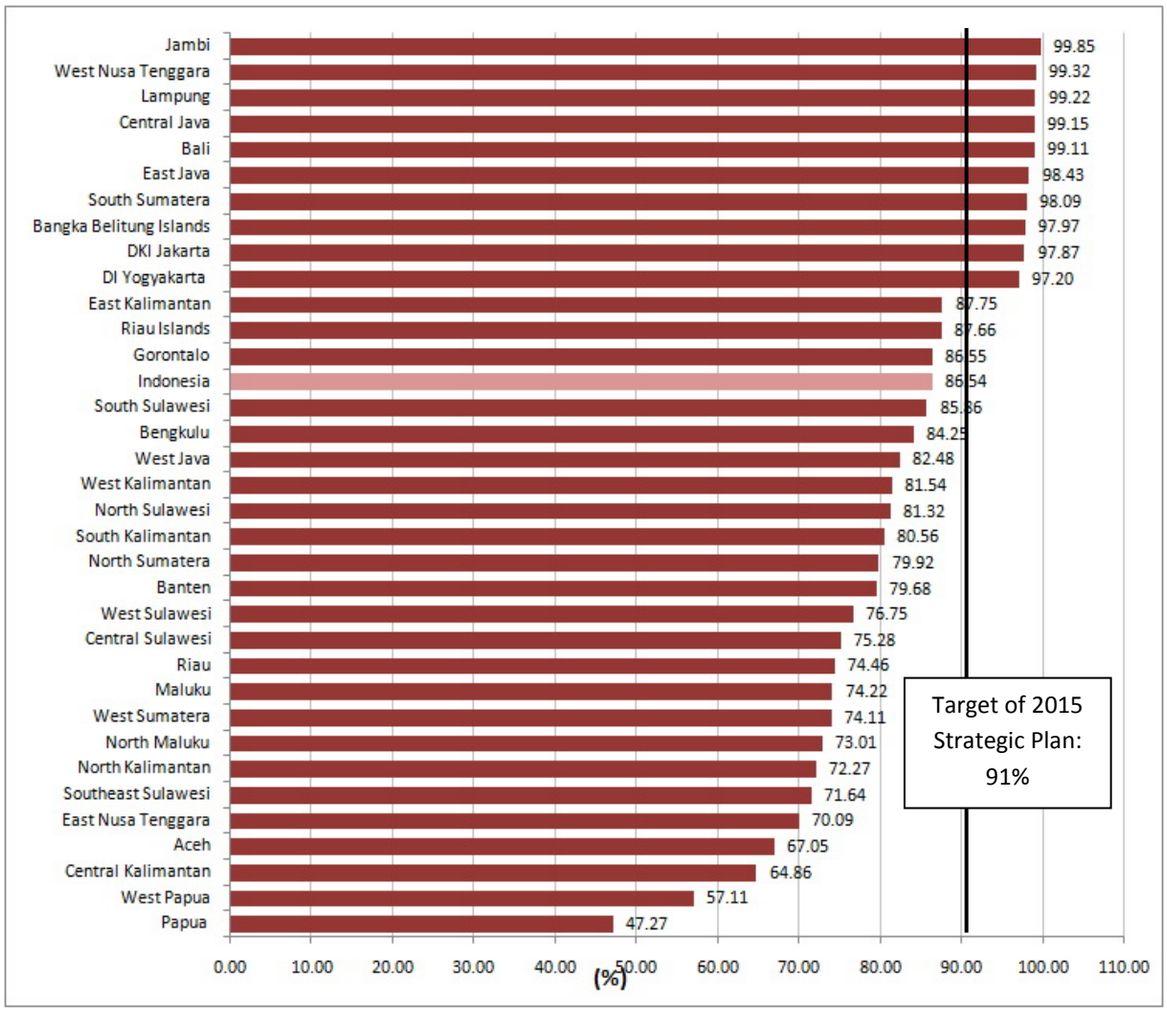
Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

The figure above shows that all infants in the provinces of Jambi, West Nusa Tenggara, South Sumatera, Central Java and Lampung have been immunized against measles. The provinces with the lowest coverage were Papua at 62.40%, followed by Aceh at 69.60% and West Papua at 73.69%.

b. Complete Immunization on Infants

Infant immunization program intends that each baby receives complete basic immunization. The achievement of the program is measured through complete basic immunization indicator. The achievement of this indicator in Indonesia in 2015 amounted to 86.54%. This figure did not reach the target of 2015 Strategic Plan which was set to 91%. As many as ten provinces (29%) reached that target.

FIGURE 5.24
COVERAGE OF COMPLETE BASIC IMMUNIZATION ON INFANTS
BY PROVINCE, 2015



Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

The three provinces with the highest achievement in complete basic immunization on infants in 2015 were Jambi (99.85%), West Nusa Tenggara (99.32%), and Lampung (99.22%). The three provinces with the lowest achievement, on the other hand, were Papua (47.27%), West Papua (57.11%), and Central Kalimantan (64.86%). Data and information related to basic immunization on infants by province in 2015 can be found in Annex 5.16.

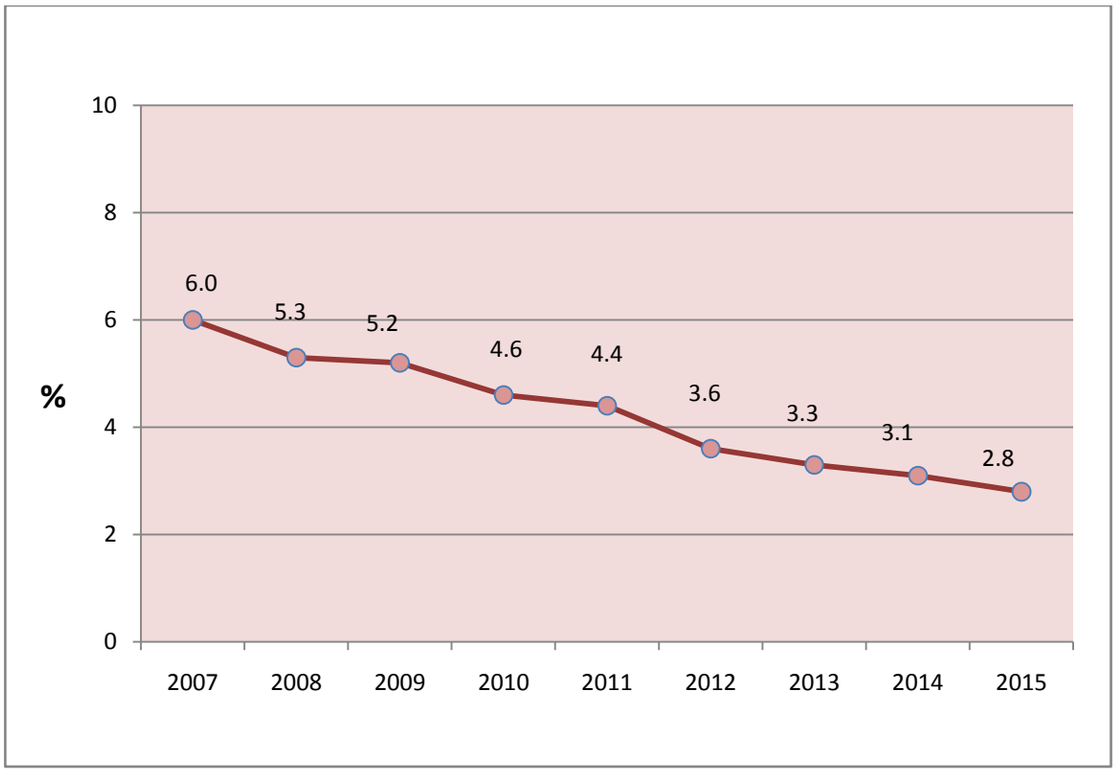
c. Drop Out Rate of the Coverage of Immunization of DPT/HB1–Measles

Basic immunization on infants should be administered to children according to age. It is expected then that the immune system can work optimally. However, in certain circumstances some babies do not get complete basic immunization. This group is referred to

as immunization dropouts (DO). The number of babies who are immunized against DPT/HB1 on their first round of immunization, but are not immunized against measles, is called dropout rate of immunization of DPT/HB1 – Measles. This indicator is obtained by calculating the difference between a decrease in the coverage of immunization against measles to the coverage of immunization against DPT/HB1.

The Drop Out Rate of DPT/HB1–Measles in 2015 amounted to 2.8%. This figure is lower than that in 2014 which amounted to 3.1%. The Drop Out Rate of DPT/HB1–Measles indicates a declining trend from 2007 to 2015 which means that more and more babies have received complete basic immunization. The downward trend is explained in the figure below.

FIGURE 5.25
DROP OUT RATE OF THE COVERAGE OF IMMUNIZATION OF DPT/HB(1) – MEASLESON INFANTS, 2007 – 2015



Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

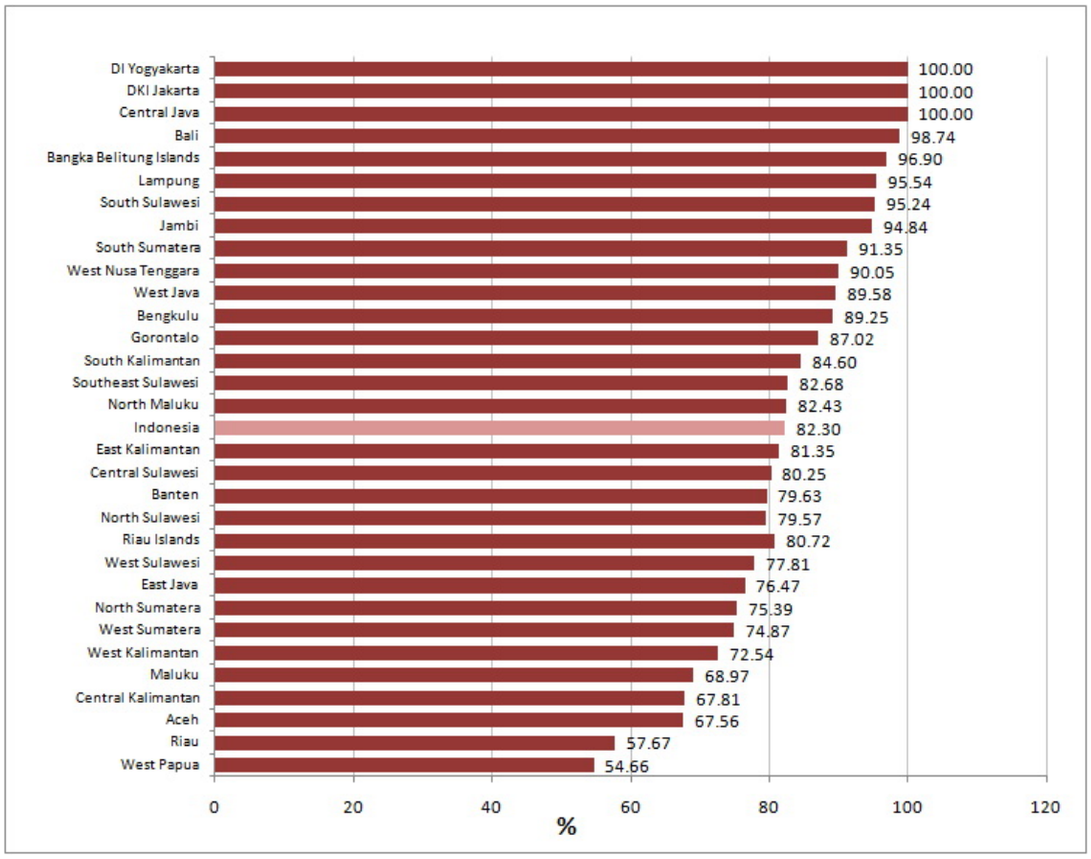
The DO Rate of DPT/HB1 – Measles is expected not to exceed 5%. It has been kept down from 2010 to 2015. More detailed data and information on the dropout rate of the coverage of immunization of DPT/HB1 – Measles and DPT/HB(1) – DPT/HB(3) from 2013 to 2015 can be found in Annex 5.17.

d.Universal Child Immunization (UCI) Villages / Administrative Villages

Another indicator to assess the success of immunization program is Universal Child Immunization (UCI) villages/administrative villages. UCI villages/administrative villages can be described as those with ≥80% of the infants (0-11 months) having received complete basic immunization. The coverage of UCI villages/administrative villages by province can be found in Figure 5.26.

In 2015, three provinces had the highest achievements, namely DI Yogyakarta, Jakarta and Central Java, at 100%. The province of West Papua, on the other hand, had the lowest performance at 54.66%, followed by Riau at 57.67%, and Aceh at 67.56%. Related information on the achievement of UCI villages/administrative villages in 2013-2015 by province can be found in Annex 5.18.

FIGURE 5.26
COVERAGE OF UCI VILLAGES / ADMINISTRATIVE VILLAGES
BY PROVINCE, 2015



Source: Directorate General of Disease Prevention and Control, the Ministry of Health RI, 2016

4. School Children Healthcare

School period is important to a child's stage of development. Many health concerns are either introduced or taking place during that period, for example the implementation of Clean and Healthy Lifestyle (*PHBS* or *Perilaku Hidup Bersih dan Sehat*) such as brushing teeth properly and washing hands with soap, as well as a number of health problems such as dental caries, worm infection, abnormal refraction or visual acuity, and nutritional problems. Children healthcare is also considered as intervention in school children.

School children are a strategic target for the implementation of health programs, because apart from the large numbers, they are also an easy target to reach sincethey are organized under one institution. The activity is prioritized for first grade students of elementary school/equivalent. The medical examination is conducted by health personnel assisted by other trained personnel, such as teachers of *UKS* (School Health Program) or *UKGS* (School Dental Health Program) and young physicians (*dokter kecil*). Health personnel in question refers to medical professionals, nurses or other health center personnel who have been trained as executive personnel for *UKS/UKGS*. Teachers of *UKS/UKGS* refers to classroom teachers or teachers appointed as *UKS/UKGS* supervisors and have had their *UKS/UKGS* training. Young physicians refers to fourth and fifth graders who have received training in first aid and health promotion.

The program aims to introduce hygiene and dental health as early as possible. It is also intended to increase students concern with the importance of maintaining oral health in particular as well as physical and environmental health in general.

Health efforts implemented to this group by conducting health screening to first grade elementary school/equivalent is also one indicator evaluated through the Strategic Plan of the Ministry of Health. Health screening is intended to detect health problems at an early stage in school children in order to take immediate action to prevent the situation from getting worse. This activity obtains data or information in assessing the health development of the school children, which can be taken into consideration in planning, monitoring and evaluating the activities of School Health Program (*UKS* or *Usaha Kesehatan Sekolah*).

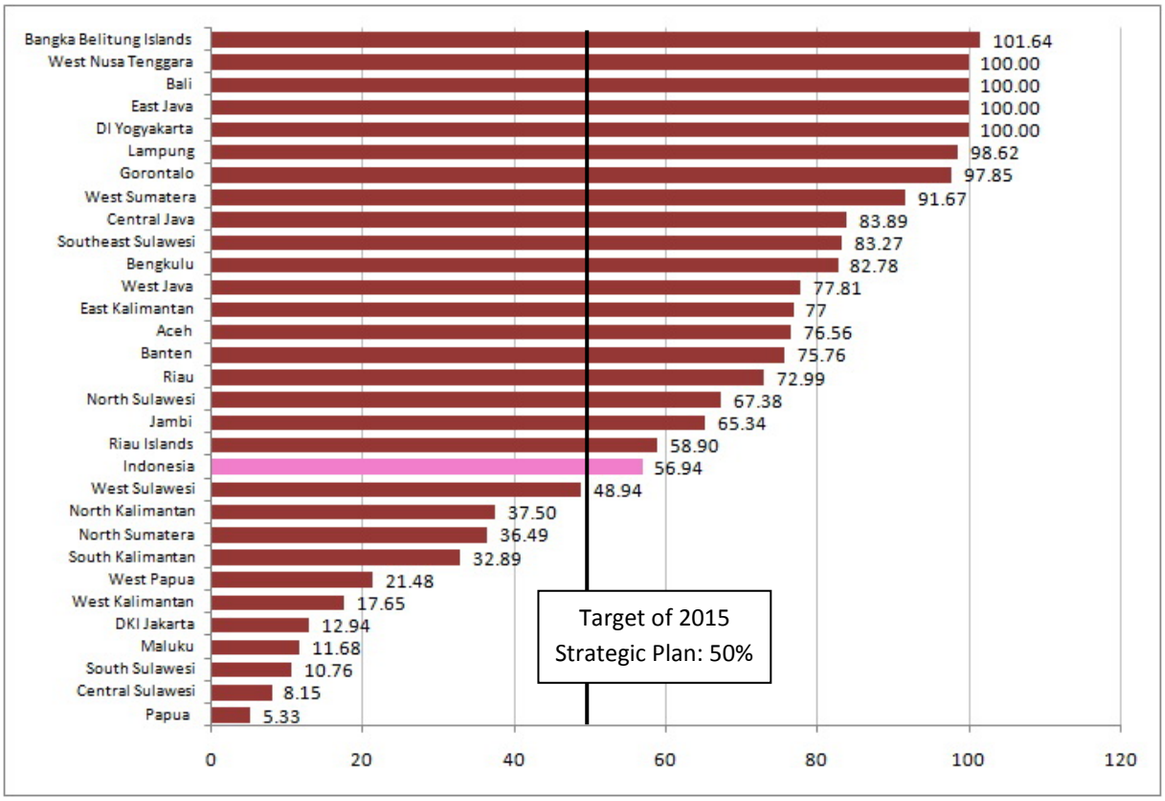
4.a Health Screening toFirst Grade Elementary Students

The health screening indicator in Strategic Plan 2010-2014 is different with that in Strategic Plan 2015-2019. If at the end of 2014 the indicator was focused on school, then in 2015 it was more focused on health center. The target was set based on the data at the end of 2014, which recorded the coverage of schools implementing the health screening, reaching 82% (when converted into number of health centers, the coverage amounted to at least 40%) from the target that was set at 95%. The 2014 achievement had 5% average increase, with 8.3% increase compared to that in 2013. In 2015, the health screening to first graders finally reached the set targets.

In 2015 the coverage reached 57%, which means as many as 5,541 health centers have carried out health screening to first grade elementary students. The 2015 national target was set at 50% by 2015, and there were 19 out of 34 provinces that reached the target: health centers conducting health screening to first graders.

The coverage of health centers conducting health screening to first grade elementary students had fairly large disparities among provinces as shown in Figure 5.27. There are four provinces that have not submitted the data of health screening to first graders, namely South Sumatera, East Nusa Tenggara, Central Kalimantan and North Maluku.

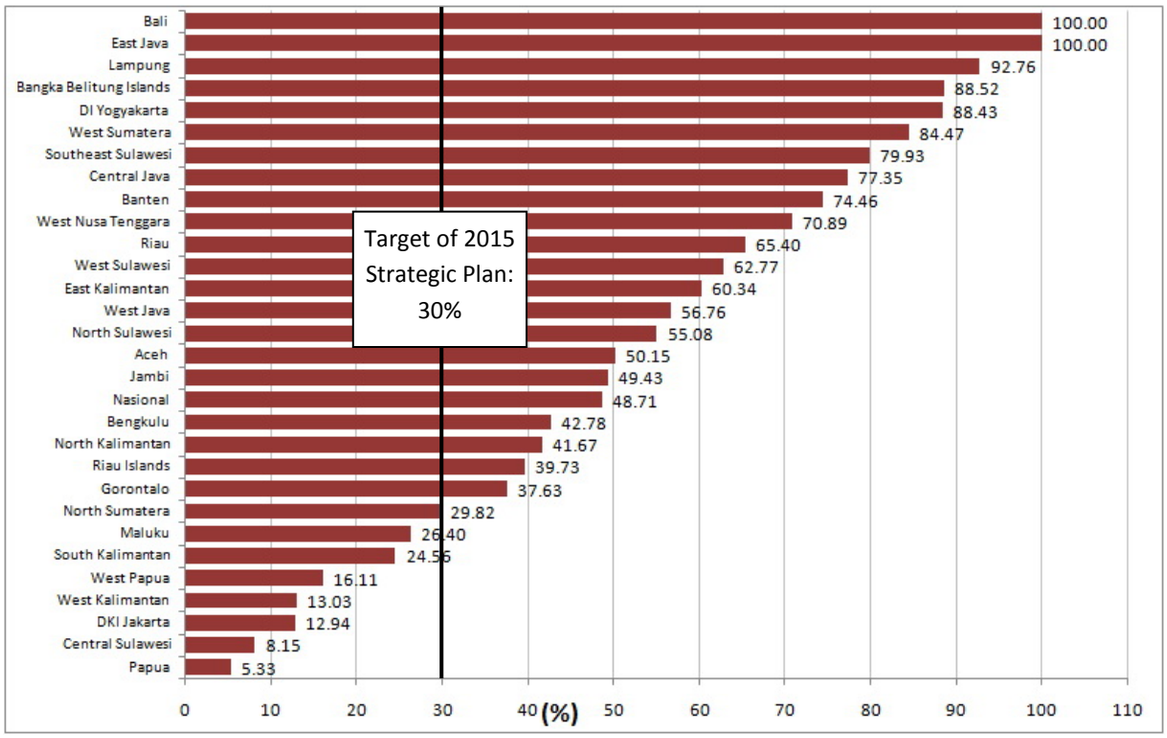
FIGURE 5.27
COVERAGE OF HEALTH CENTERS CONDUCTING HEALTH SCREENING TO FIRST GRADE ELEMENTARY STUDENTS BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

4.b Health Screening to Seventh and Tenth Grade Students

FIGURE 5.28
COVERAGE OF HEALTH CENTERS CONDUCTING HEALTH SCREENING TO SEVENTH AND TENTH GRADE STUDENTS BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Figure 5.28 shows that most of the provinces have already met the target of 2015 Strategic Plan, which was set at 30%. Two provinces even achieved 100%, namely East Java and Bali. Only eight provinces have not yet reached the target. The lowest achievement belonged to the provinces of Papua and Central Sulawesi. On the other hand, the provinces of South Sumatera, East Nusa Tenggara, Central Kalimantan, South Sulawesi, and North Maluku have not submitted the data; thus, they are not shown on the chart.

The difficulty in meeting the target of health centers conducting health screening to first, seventh and tenth graders can be caused by several problems. One that is often found in the regions is the lack of personnel in the health center to handle the numerous elementary and junior high schools and their equivalents; hence it takes a lot more time to conduct health screening. In addition, the report management of the health center has not been well-integrated. Although health screening has been implemented in many health centers, in some provinces the managers of UKS in the districts/municipalities are in a different organizational structure; therefore, the coordination between recording and reporting has not been going well. There was also a change in the operational definition of health screening indicator; from health screening to students performed by school in2014

Strategic Plan changed to health screening to students performed by health center in 2015 Strategic Plan.

Data and information about the coverage of health centers conducting health screening to seventh and tenth grade students by province can be found in Annex 5.23.

5. Child Abuse Victims Healthcare

According to Law Number 23 Year 2002 concerning Child Protection, a child refers to a person who has not turned eighteen, including those still developing in the womb. All children have the right to protection. Child protection refers to all activities to protect children and their rights to live, to grow, to develop and to participate, as well as to receive protection from violence and discrimination.

The World Health Organization (WHO) defines child abuse as all forms of physical and emotional ill-treatment, sexual abuse, neglect, exploitation, commercialism, or others that result in actual or potential harm to the child's health, survival, development, or dignity, which are inflictedwithin a responsibility relationship.

According to the National Child Protection Commission (2006), among the causes of violence against children are as follows: 1) Domestic violence, which occurs in the family involving either the father, the mother or other relatives. Kids are often the target of the anger of parents, 2) Family dysfunction, in which the role of the parents is not running as it should be. In this case, there is dysfunction in the father's role as leader of the family and the mother's role as a guiding and loving figure, 3) Economic factors, the pressure of which leads to violence. 4) An incorrect perception about the position of children in the family, in which the parents assume that the child is a person who does not know anything. This leads the parents to believe that they can do anything in their parenting. To make matters worse, violence against children is also inspired by the images in television or other media in the community.

In the health sector, government intervenes by providing access to health services for child abuse victims which consists of services on the primary level through health centers. The approach of child abuse victims healthcare in health centersis conducted through three aspects which include medical aspect (administering physical examination and supporting examination), medicolegal aspect (*visum et repertum*) and psychosocial aspect (ensuringa safe house). Case management is multi disciplinary, involving healthcare institutions, child protection agencies, legal aid, law enforcement and other social institutions, which are formed in networking mechanism.

Health services are more focused on promotive and preventive efforts such as education about the impact of the Violence against Children (*KtA* or *Kekerasan terhadap Anak*) on child development, both physically and psychologically, at school through *UKS* program and at the community level by providing counseling to the mothers in Family Welfare Guidance (*PKK* or *Pembinaan Kesejahteraan Keluarga*) and others. Besides the two types of efforts, health centers also provide curative services in the form of medical emergency care, rehabilitative services by providing counseling, as well as medicolegal and psychosocial support referrals.

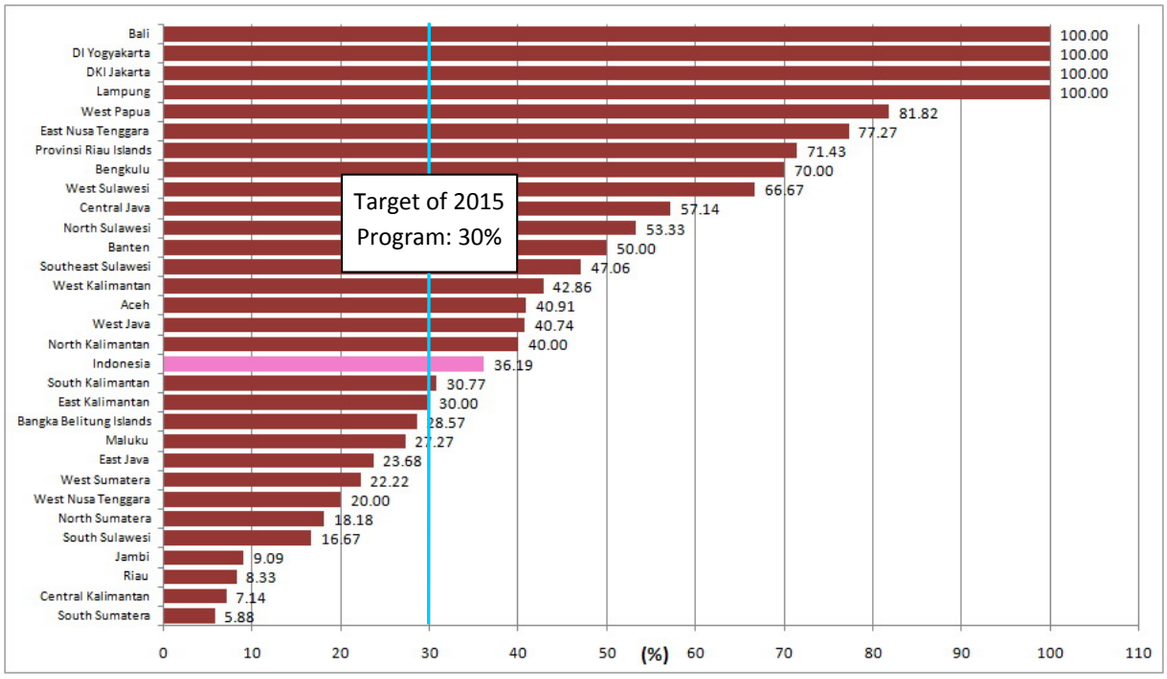
Child Abuse Victims Healthcare program is geared towards providing comprehensive healthcare access in both primary and referral levels. The target of health centers capable of providing *KtA* case management shall mean that every district/municipality has at least two health centers capable of achieving the target. The health center has to meet the criteria of having a number of trained personnel for *KtA* case management (physicians or dentists and nurses or midwives) and having capability to perform *KtA* case management referral services.

Efforts to improve access to and quality of health services are carried out by preparing central and local facilitators as well as service providers in health centers. The latter is done by training of trainers in tiers in preparing health centers to be able to perform *KtA* case management, the implementation of which may use either national budget or de-concentration fund. In addition, during 2012-2013 efforts were implemented to strengthen referral services at hospitals. There were as many as 1,694 health centers capable of providing *KtA* case management in 2014. The percentage of districts/municipalities with a minimum of two health centers capable of providing *KtA* case management reached 78.07%, an increase compared to that in 2013, which amounted to 76.26%. Currently, 71 General/Bhayangkara Hospitals are available in 28 provinces with Integrated Service Center (*PPT* or *Pusat Pelayanan Terpadu*) or Integrated Crisis Center (*PKT* or *Pusat Krisis Terpadu*) for KtAvictims and 39 hospitals in 33 provinces providing servicesfor KtA victims in the ER performed by trained health personnel.

In 2014 the target of child health protection program, namely health centers capable of providing *KtA* case management with two in total 90% district/municipality as the indicator, was not reached. That is due to the program being not a priority. As a result, it is generally felt that the support and commitment of local government to the child abuse victims healthcare program is lacking. It can be seen from the inadequate budgetary support and the mutation of majority of health personnel who have been trained in *KtA* case management, especially physicians.

In the Code of Criminal Procedure Article 108 paragraph (3) it is stated that every civil servant, in their service to the country, upon knowing about an event that would constitute a criminal offense shall immediately report the matter to the investigators or prosecutors. In support of that end, the government issued the Regulation of the Ministry of Health Number 68 Year 2013 regarding Obligations of HealthcareProviders to provide information on the alleged violence against children. This Regulation is expected to encourage health personnel to work more professionally.

FIGURE 5.29
PERCENTAGE OF DISTRICT/MUNICIPALITY HAVING AT LEAST FOUR HEALTH CENTERS CAPABLE OF PROVIDING *KTA* CASE MANAGEMENT BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

In 2014, this indicator only counted the percentage of districts/municipalities with two health centers capable of providing *KtA* case management, then in 2015 the number was changed to four, hence the coverage by province dropped. In other words, the criteria was raised, but was not supported by the budget so that the program could not be executed properly.

Figure 5.29 shows that in 2015 there were 36.19% of districts/municipalities in Indonesia having four health centers capable of providing *KtA* case management, four of them with a percentage of 100%. The number is lower than that in 2014 when there were fourteen provinces with a percentage of 100%. Percentage of 100% means that all districts/municipalities in the province have at least four health centers capable of providing *KtA* case management.

Four provinces have not submitted the data ofthe percentage of their districts/municipalities with four health centers capable of providing *KtA* case management, namely the provinces of Central Sulawesi, Gorontalo, North Maluku, and Papua. More detailed data and information on the percentage of districts/municipalities with four health centers capable of providing *KtA* case management by province is presented in Annex 5.20.

6. Youth Healthcare

Youth Healthcare (*PKPR* or *Pelayanan Kesehatan Peduli Remaja*) to be provided by health centersis one of child health efforts established through Presidential Instruction. This program was initiated in 2003, aiming specifically to improve the knowledge and skills of the adolescents on reproductive health and healthy behavior as well as provide quality healthcare to them.

Health centers with *PKPR* program provides services within the facility as well as reaching out to schools. It is intended for either school-based or community-based teen groups. This is done so that the services provided can reach all groups of adolescents (aged 10-18 years). The health centers capable of providing PKPR are assigned the following:

1) Foster at least one school (either public or religious) by initiating Information, Education, and Communication (*KIE* or *Komunikasi, Informasi, dan Edukasi*) activities at least twice a year;

2) Train health recruits from students at least 10% of the total number of students in the target schools; and

3) Provide counseling services to all adolescents in need; the service of which can be provided by contacting *PKPR* officers.

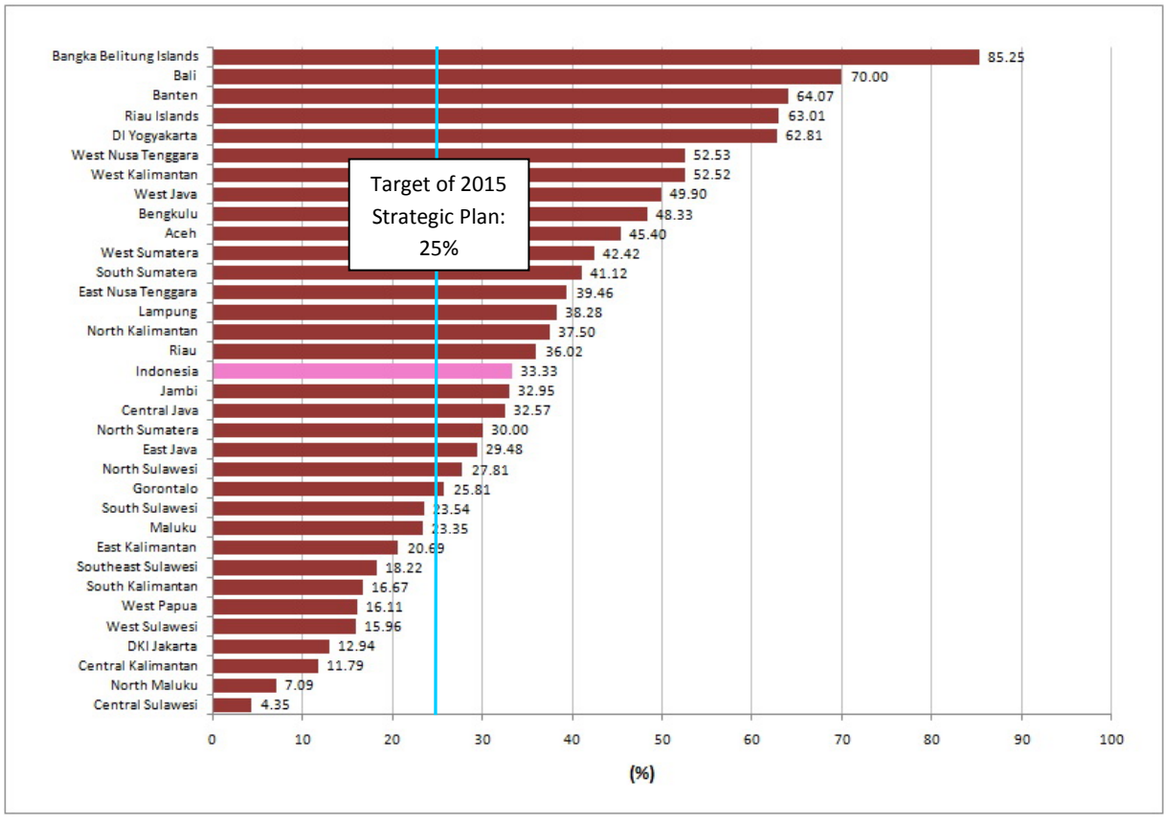
PKPR is a comprehensive approach focusing on promotive and preventive health efforts by providing training in healthy lifestyle and psychosocial skills with Education of Healthy Life Skills (*PKHS* or *Pendidikan Keterampilan Hidup Sehat*). Counseling is the attribute of *PKPR* considering adolescent problems are not only physical but also psychological. The service also tries to reach out to youth groups through *KIE*, Focus Group Discussion (FGD), and counseling visit to schools and other youth groups.

The phenomenon of peer groups is also a concern in *PKPR*. Therefore, this service also empowers the youth as peer counselors. It is expected that they become agents of change in their group. It is a very potential approach since adolescents consider their peer as the place to go to have a discussionand obtain information.

In addition to providing information, education, and activities as noted above, this school healthcare also include medical examination, examination on intelligence development, immunization, early detection efforts on cases that are potential to happen, simple treatment, first aid, and referral for cases that cannot be dealt with at school.

Percentage of districts/municipalities with a minimum of four health centers capable of providing *PKPR* by province in 2015 can be found in Figure 5.30.

FIGURE 5.30
PERCENTAGE OF HEALTH CENTERS CAPABLE OF PROVIDING YOUTH HEALTHCARE BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The percentage of districts/municipalities with a minimum of four health centers capable of providing *PKPR* in Indonesia in 2015 reached 33.33%. Eleven provinces (33.33%) did not reach the target of 2015 Strategic Plan which was set to 25%.

There were 3,243 health centers capable of providing *PKPR* in all 33 provinces in Indonesia in 2015. Data and more detailed information related to the percentage of districts/municipalities with health centers capable of providing *PKPR* by province are presented in Annex 5.21.

C. Nutrition

This nutrition section will discuss efforts to increase the nutrition for under-fives: exclusive breastfeeding, coverage of vitamin A supplementation on infants at the age of 6-59 months, coverage of weighed under-fivesin posyandu as well as the detection and treatment of malnutrition. It will also discuss the adequacy of energy and protein in under-fives, as well as the elderly to include the whole population.

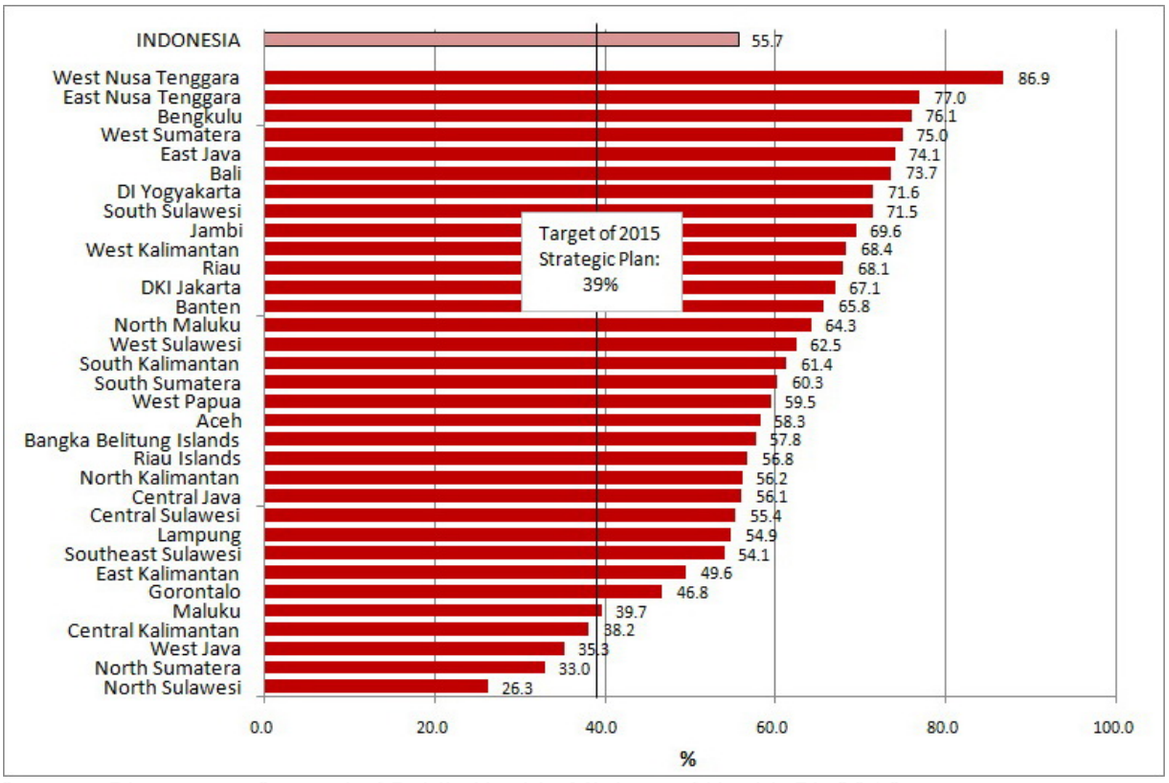
1. Exclusive Breastfeeding

Exclusive breastfeeding (ASI) based on the Government Regulation of the Republic of Indonesia Number 33 Year 2012 refers to breast milk that the mother gives to her infants since birth for six months, without supplementing and/or substituting it with other food or drink (except medicine, vitamins, and minerals).

Breast milk contains colostrum, which is rich in antibodies since it has protein for endurance and antibacterial agents in an amount so high that exclusive breastfeeding can reduce the risk of death in infants. Yellowish colostrum is produced on the first day to the third day. The fourth to the tenth day the breast milk contains less immunoglobulin, protein, and lactose than colostrum does but is higher in fat and calories and is white in color. In addition to nutrients, breast milk also contains specific absorbing agent in the form of special enzymes that will not disrupt the enzyme in the infant's intestines. Infant formulas do not contain the said enzymes, therefore the absorption of food depends on the enzymes in the the infant's intestines.

According to the result of Basic Health Research (*Riskesdas* or *Riset Kesehatan Dasar*) in 2013, the highest percentage of breastfeeding process took place in the first 1-6 hours after birth (35.2%), followed bythat in less than 1 hour after birth (34.5%). The lowest percentage of breastfeeding, on the other hand, occurred in 7-23 hours after birth at 3.7%.

FIGURE 5.31
COVERAGE OF EXCLUSIVE BREASTFEEDING ON 0-6 MONTH OLD INFANTS BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

Considering the target of 2015 Strategic Plan was set to 39%, the national coverage of exclusive breastfeeding on infants aged less than six months, which amounted to 55.7%, has reached the target. The coverage of exclusive breastfeeding on infants aged 0-6 months by province is ranging between 26.3% (North Sulawesi) to 86.9% (West Nusa Tenggara). Of the 33 provinces that submitted the data, 29 of them (88%) managed to reach the target of 2015 Strategic Plan.

2. Coverage of 6 - 59 Month Old Children Supplemented with Vitamin A Capsules

Vitamin A is one of the important nutrients that dissolves in fat, is stored in the liver, and cannot be produced internally by the body hence it should be provided from the outside.

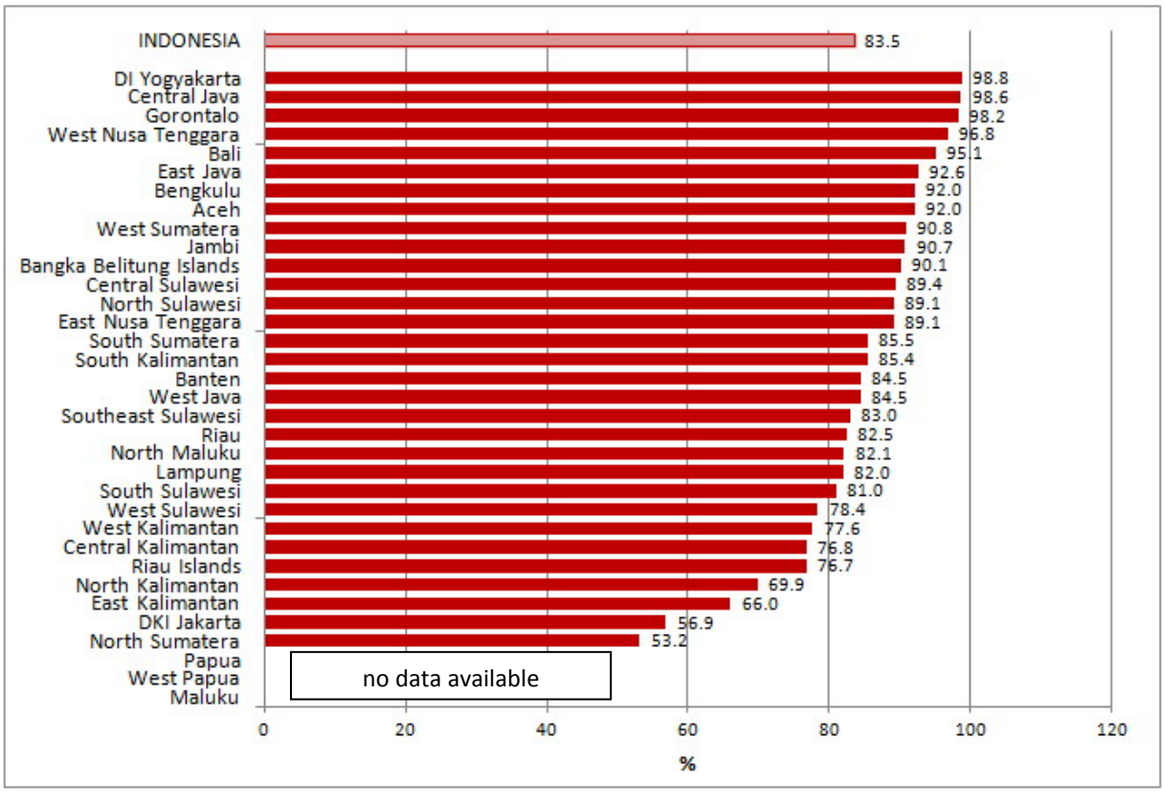
Vitamin A deficiency (*KVA* or *Kekurangan Vitamin A*) can decrease the immune system and increase the risk of infant morbidity and mortality. Vitamin A deficiency is the leading cause of preventable blindness in children.

In the Annex to the Regulation of the Minister of Health Number 21 Year 2015 it is stated that in order to reduce the risk of infant morbidity and mortality from vitamin A deficiency, the government organized a provision of vitamin A in the form of a blue capsule with 100,000 IU for infants aged six to eleven months and a red capsule with 200,000 IU both for children under the age of twelve to fifty-nine months and for postpartum women.

According to the Guidelines for Administration of Vitamin A Supplements, vitamin A supplementation is given to all children aged 6-59 months simultaneously through *posyandu* in February or August for infants aged 6-11 months and in February and August for under-fives (12-59 months).

In 2015, the coverage of vitamin A on infants aged 6-59 months in Indonesia reached 83.5%, a slight decrease compared to that in 2014 which reached 85.4%. Of the 31 provinces submitting the data, eleven provinces (35%) achieved 90% coverage of vitamin A. The highest coverage of vitamin A supplementation on 6-59 months infants belonged to DI Yogyakarta with 98.8% and the lowest belonged to North Sumatera with 53.2%.

FIGURE5.32
COVERAGE OF 6 – 59 MONTH OLD CHILDREN SUPPLEMENTED WITH VITAMIN A CAPSULES BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The target ofthe coverage of vitamin A on infants aged 6-11 months was set at 75.4% with the achievement ranging from 16.4% (North Sumatera) to 99.3% (DI Yogyakarta). On the other hand, the target of the coverage of vitamin A on under-fives (12-59 months) was set at 84.9% with the achievement ranging from 55.3% (DKI Jakarta) to 98.7% (DI Yogyakarta).

The high coverage of vitamin A supplementation is partly due to geographical conditions and affordable access to the posyandu in distributing vitamin A. The provinces with a high coverage of vitamin A supplementation are usually those with a high coverage of weighed under-fives in posyandu. Likewise, some provinces have a low coverage of vitamin A supplementation, such as Papua and West Papua, due to the low level of public participation in weighing their children in posyandu (D/S or weighed under-fives divided by total number of under-fives in all posyandus of a working area) as well as due to geographical constraints.

Vitamin A supplementation in the provinces of DKI Jakarta and North Sumatera is very low due to incomplete records and reports. Not all activities in the regions were reported, including vitamin A supplementation by sweeping performed by healthcare personnel.

The detailed achievement of vitamin A supplementation on infantsand under-fives by province can be found in Annex 5.24.

3. Coverage of Weighed Under-Fivesin *Posyandu* (D/S)

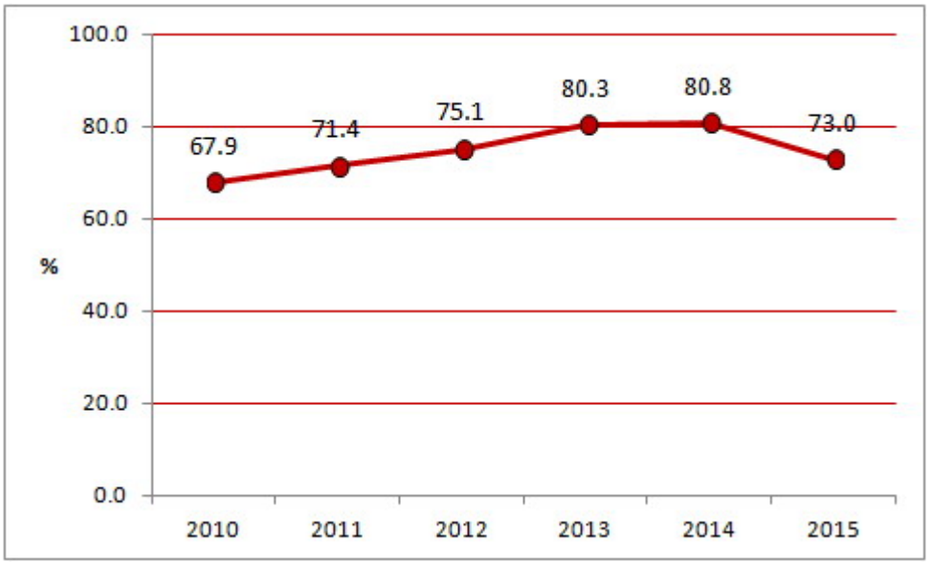
Coverage of weighed under-fives in *posyandu* (D/S) refers to the number of under-fives who are weighed in all reporting posyandus of one working area in a certain period divided by the total number of under-fives in all reporting *posyandus* of one working area in a certain period.

Community participation in child weighing is very important in the early detection of cases of undernutrition and severe malnutrition. By weighing under-fives regularly, their growth can be monitored intensively. So when a child doesn't gain weight or is detected ill, efforts can be taken immediately to prevent them from becoming undernourished or severely malnourished. The sooner it is found, the better the cases of undernutrition or severe malnutrition are treated. Swift and efficient treatment in accordance with case management of malnutrition in children reduces the risk of death from malnutrition.

After weighing the under-fives, in addition to counseling, the activity is also followed up by providing supplementary food and supplementary nutrition.

Malnutrition can occur in all age groups, but the groups of infants and under-fives require more attention. The age of 0-2 years is the important stage of growth and development (the golden period), especially during fetal period. It is very crucial since a disruption that occurs during this period cannot be remedied in the following period and will have negative effect on the quality of the next generation.

FIGURE5.33
COVERAGE OF WEIGHED UNDER-FIVES (D/S) IN INDONESIA, 2010 – 2015

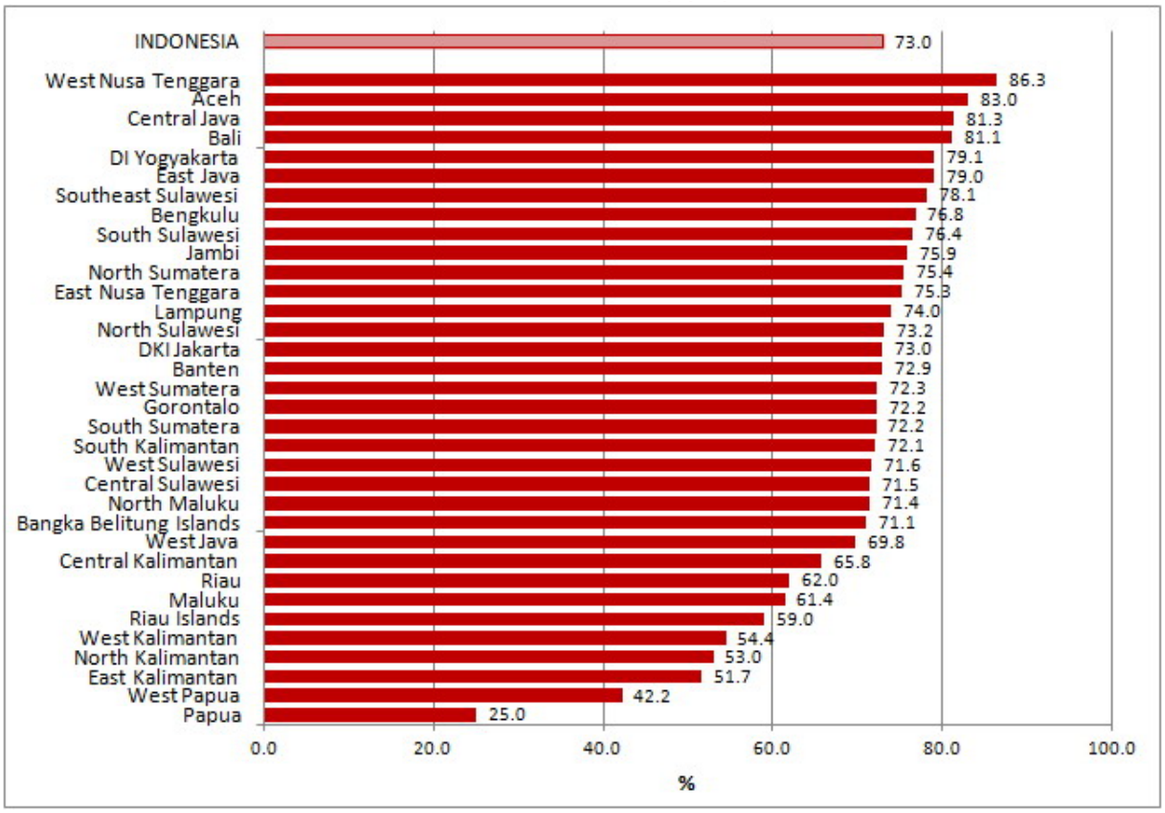


Source: Directorate General of Public Health, Ministry of Health RI, 2016

Coverage of weighed under-fives from 2010 to 2014 in Indonesia tends to increase. However, in 2015 the number decreased to 73.0%. It was because in 2015 there was a shift in the National Medium Term Development Plan (*RPJMN* or *Rencana Pembangunan Jangka Menengah Nasional*) of 2015 – 2019, in which the program target was expanded and new

indicators were added related to the Strategic Plan of the Ministry of Health. Therefore, the scope and target of child weighing in *posyandus* had not been socialized properly.

FIGURE5.34
COVERAGE OF WEIGHED UNDER-FIVES (D/S) BY PROVINCE, 2015



Source: Directorate General of Public Health, Ministry of Health RI, 2016

The highest coverage of weighed under-fives belonged to the province of West Nusa Tenggara with 86.3%. The lowest coverage, on the other hand, belonged to the provinces of Papua and West Papua. The coverage of weighed under-fives in posyandus per province is detailed in Annex 5.26.

4. Detection and Treatment of Cases of Malnutrition

Based on the under-five weighing in posyandu, 26,518 cases of malnutrition among under-fives were detected in Indonesia. Malnutrition is determined based on a calculation of weight for height of the under-fives, where the Z-score is <-3 from standard deviation (severe underweight). Meanwhile, according to the results of 2013 Riskesdas, the prevalence of under-fives with severe underweight reached 5.3%. Therefore, if the percentage is applied to the target under-fives (S) listed in the reporting posyandus (21,436,940), the number of severely malnourished under-fives (severe underweight cases) amounted to approximately 1.1 million under-fives.

Thus the number of malnutrition cases detected among children is still far below the estimated number of malnutrition cases in the community. Therefore, it is necessary to improve public participation in weighing their under-fives because the coverage of weighed children has not reached three-quarters of the number of under-fives listed in the reporting posyandus. It is expected that child weighing activities in *posyandus* can reach at least 80% coverage while the rest of the children can be reached out by home sweeping that is performed by health personnel to the homes of the under-fives. In addition, the skills of posyandu personnel (cadres) need improving to better detect the nutritional status of the under-fives.

A number of efforts have been made to increase community participation in child weighing in posyandu, such as initiating inter-program and inter-sector cooperations, as well as involving active role of the community.

5. Energy Sufficiency Level

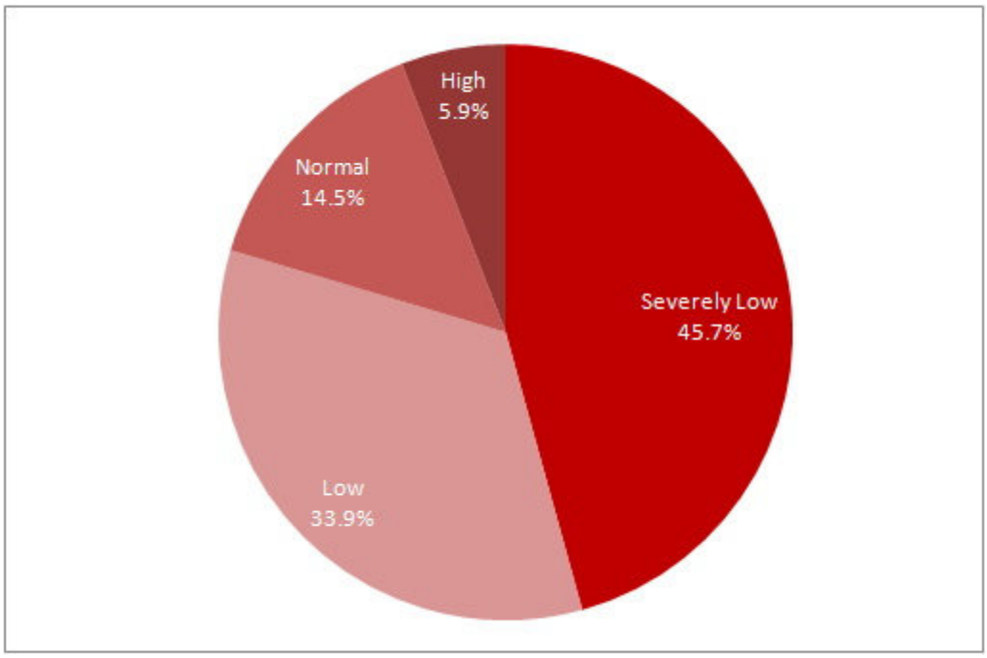
Energy sufficiency level refers to the percentage of daily energy intake per individual to the Recommended Energy Intake (*AKE* or *Angka Kecukupan Energi*) that is recommended for every age group and sex.The AKE used is based on the Regulation of the Minister of Health Number 75 Year 2013 regarding the Recommended Dietary Allowance (*AKG* or *Angka Kecukupan Gizi*) for the people of Indonesia.

a) Proportion of Population by Classification of Energy Sufficiency Level

Classification of energy sufficiency level of national and provincial population is described as follows:

- **minimal** or **severely lower** energy sufficiency level than the AKG (<70% AKE), which means the energy intake is less than 70% AKE
- **lower** energy sufficiency level than the AKG(70 – <100% AKE) which means the energy intake is 70% to less than 100% AKE
- **normal** energy sufficiency level or **corresponding to the AKG** (100 –<130% AKE) which means the energy intake is 100% to less than 130% AKE
- **higher** energy sufficiency level than the AKG (≥130% AKE) which means the energy intake is equal to or greater than 130% AKE

FIGURE5.35
PROPORTION OF POPULATION BY CLASSIFICATION OF ENERGY SUFFICIENCY LEVEL
2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

According to the 2014 Total Diet Survey, the majority of the population in Indonesia had severely low and low energy sufficiency levels, amounting to 79.6%, comprising 45.7% with severely low/minimal and 33.9% with low.

FIGURE5.36
DISTRIBUTION OF CLASSIFICATION OF ENERGY SUFFICIENCY LEVEL OF THE POPULATION BY PROVINCE, 2014

Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

The cases of severely low and low energy sufficiency levels were the highest in the provinces of Lampung (89.5%), and North Sulawesi and East Nusa Tenggara (each 89.3%). The lowest percentage, on the other hand, belonged to Jakarta (65.9%). In addition to having the lowest cases of severely low and low energy sufficiency levels, Jakarta had the highest cases of high energy sufficiency level with 12.4%.

The following is the proportion of the population by classification of energy sufficiency level and their characteristics:

TABLE 5.1

PROPORTION OF POPULATION BY CLASSIFICATION OF ENERGY SUFFICIENCY LEVEL AND THEIR CHARACTERISTICS, 2014

Characteristics	Severely Low	Low	Normal	High
Age				
0-59 months	6.8	48.9	27.1	17.1
5-12 years	29.7	40.1	19.9	10.2
13-18 years	52.5	30.3	12.2	5.0
19-55 years	50.0	32.5	12.9	4.6
>55 years	44.6	33.5	15.5	6.3
Sex				
Male	44.7	34.3	14.9	6.1
Female	46.7	33.4	14.1	5.8
Domicile				
Urban	42.4	34.8	16.1	6.9
Rural	49.2	32.9	12.9	4.9
Ownership Index Quintile				
Lower	55.0	30.8	10.5	3.7
Lower Middle	48.9	33.6	12.6	4.9
Middle	45.7	34.0	14.8	5.5
Upper Middle	42.7	34.3	16.0	7.0
Upper	39.4	35.8	17.1	7.7

Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

In the group of normal energy sufficiency level, the higher the age group, the lower the percentage of the population with normal energy sufficiency level. Except in the age group >55 years. This is also the case in the group of high energy sufficiency level. On the other hand, it goes the opposite direction in the group of severely low energy sufficiency level.

The pattern of population distribution in urban areas by energy sufficiency level groups is similar to that in rural areas. There is little difference in the figures. In rural areas

the percentage of severely low energy sufficiency level group was higher than that in urban. And conversely the percentage of normal and high energy sufficiency level groups were more prevalent in urban areas than in rural.

The higher the ownership index quintile (the higher the economic level), the lower the proportion of population with severely low energy sufficiency level. The higher the ownership index quintile, the higher the proportion of population with normal and high energy sufficiency levels.

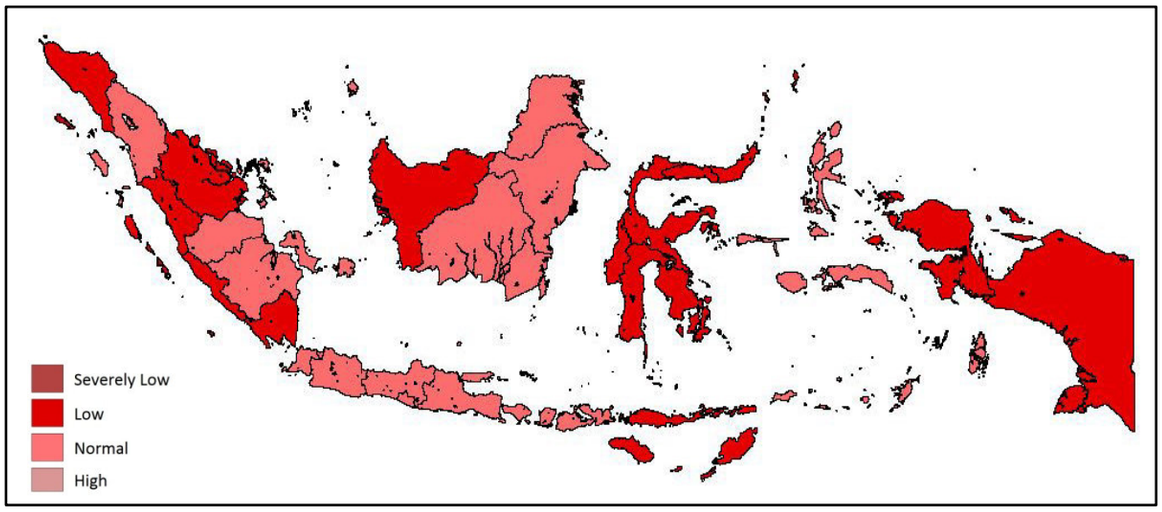
There is no significant difference in all classifications of energy sufficiency level between male and female.

b) Average Energy Sufficiency Level on 0 – 59 Month Old Children

The national average of energy intake of population aged 0-59 months amounted to 1,137 kcal, higher than the recommended energy intake (1,118 kcal). The average energy intake in urban areas (1,190 kcal) was higher than that in rural areas (1,081 kcal).

The average energy sufficiency level of population aged 0-59 months in Indonesia reached 101.0%, with 104.1% in urban areas and 97.7% in rural areas.

FIGURE5.37
DISTRIBUTION OF ENERGY SUFFICIENCY LEVEL ON 0 – 59 MONTH OLD CHILDREN BY PROVINCE, 2014



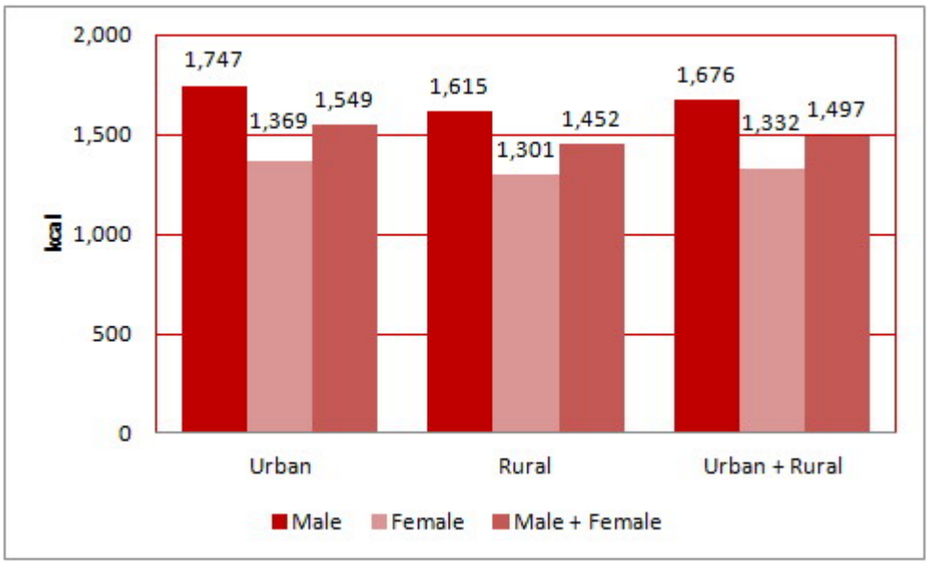
Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

A total of 18 provinces (55%) had averagely normal energy intake level for population aged 0-59 months. While the other 15 (45%) had averagely low energy intake level for the population aged 0-59 months. None of the provinces had averagely severely low or high energy intake levelfor the population aged 0-59 months. The highest average of high energy intake level for the population aged 0-59 months belonged to DKI Jakarta (114.4%) and the lowest belonged to East Nusa Tenggara (92.3%).

c) Average Energy Intake and Energy Sufficiency Level on People >55 Years Old

The average energy intake of population aged >55 years old amounted to 1,497 kcal: malewith 1,676 kcal and female with 1,332 kcal. The following figure details the average energy intake of population aged >55 years old by type of region and sex.

FIGURE5.38
AVERAGE ENERGY INTAKE LEVEL ON PEOPLE >55 YEARS OLD BY TYPE OF REGION AND SEX, 2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

In contrast to the under-fives, the average energy sufficiency level of population aged >55 years old was lower. The average energy sufficiency level of population aged >55 years reached 78% of recommended dietary intake. There is no significant difference between male and female: male with 78.8% and female with 77.3%.

More than half of the total provinces (19 provinces) had averagely low energy sufficiency level of population aged >55 years. Meanwhile, Riau Islands was the only province with averagely high energy sufficiency level.

6. Protein Sufficiency Level

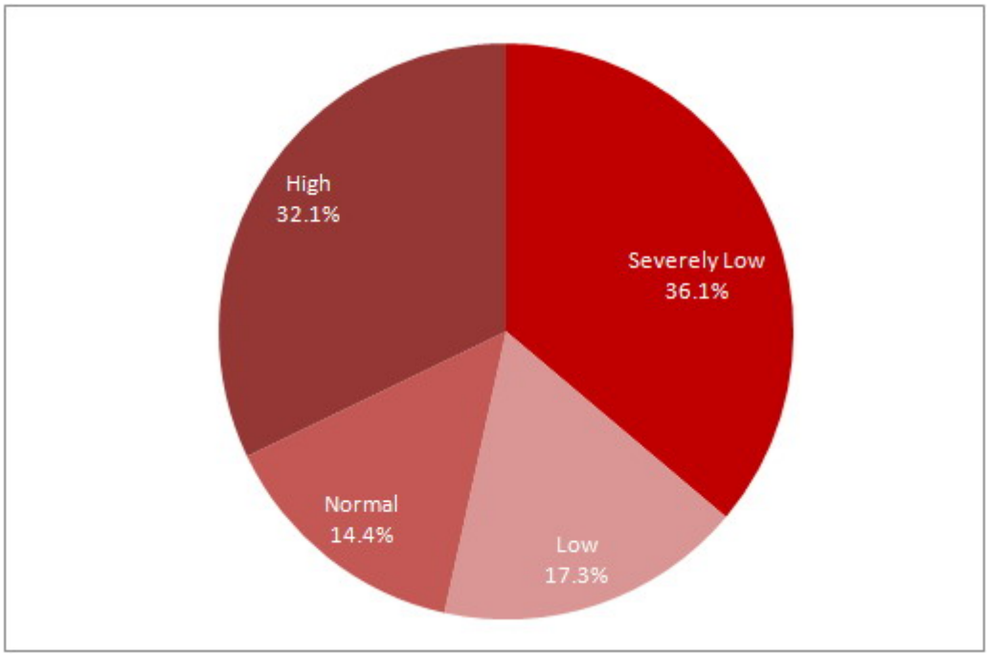
Protein sufficiency level refers to the percentage of daily protein intake per individual to Recommended Protein Intake (*AKP* or *Angka Kecukupan Protein*) that is recommended for every age group and sex. The *AKP* used is based on the Regulation of the Minister of Health Number 75 Year 2013.

a) Proportion of Population by Classification of Protein Sufficiency Level

National and provincial classification of protein sufficiency level is described as follows:

- minimal or severely lower protein sufficiency level than the *AKG* (<80% AKP), which means the protein intake is less than 80% *AKP*
- lower protein sufficiency level than the *AKG* (80% – <100% *AKP*) which means the protein intake is 80% to less than 100% *AKP*
- normal protein sufficiency level or corresponding to the *AKG* (100% – <120% AKP) which means the protein intake is 100% to less than 120% *AKP*
- higher protein sufficiency level than the *AKG* (≥120% *AKP*) which means the protein intake is equal to or greater than 120% *AKP*

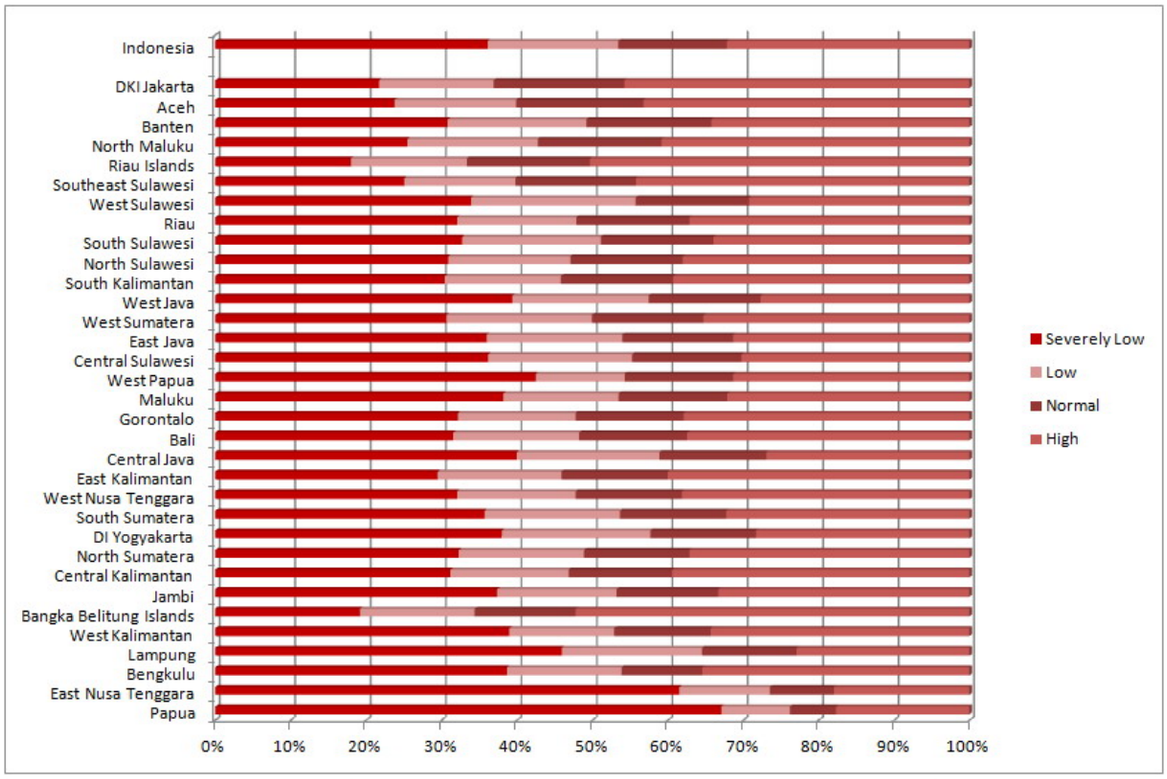
FIGURE5.39
PROPORTION OF POPULATION BY CLASSIFICATION OF PROTEIN SUFFICIENCY LEVEL 2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

According to the 2014 Total Diet Survey, more than half the population in Indonesia had severely low and low protein sufficiency level, totaling to 53.4%, comprising 36.1% of severely low/minimal protein sufficiency level and 17.3% of low protein sufficiency level.

FIGURE5.40
DISTRIBUTION OF CLASSIFICATION OF PROTEIN SUFFICIENCY LEVEL OF THE POPULATION BY PROVINCE, 2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

The cases of severely low and low protein sufficiency levels were the highest in the provinces of Papua (76.2%) and East Nusa Tenggara (73.6%). The lowest percentage, on the other hand, belonged to Riau Islands (33.4%). The province with the highest case of high protein sufficiency level was Bangka Belitung Islands (52.5%).

The following is the proportion of the population by classification of protein sufficiency level and their characteristics:

TABLE 5.2
PROPORTION OF POPULATION BY CLASSIFICATION OF PROTEIN SUFFICIENCY LEVEL AND THEIR CHARACTERISTICS, 2014

Characteristics	Severely Low	Low	Normal	High
Age				
0-59 months	23,6	10,6	11,5	54,2
5-12 years	29,3	16,1	14,7	39,9
13-18 years	48,1	18,1	13,4	20,1
19-55 years	33,8	17,9	15,1	33,3
>55 years	45,8	17,4	13,1	23,7
Sex				
Male	33,3	17,4	14,8	34,4
Female	39,0	17,3	14,0	29,7
Domicile				
Urban	31,1	17,5	15,3	36,1
Rural	41,2	17,2	13,6	28,0
Ownership Index Quintile				
Lower	51,2	16,4	11,5	21,0
Lower Middle	41,5	17,9	14,5	26,1
Middle	36,4	18,7	14,2	30,7
Upper Middle	31,4	17,4	15,2	36,1
Upper	25,5	16,0	15,9	42,6

Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

According to the characteristics, severely low protein sufficiency level is more prevalent in women, people who live in rural areas, and those with lower ownership index quintile. The lower the ownership index quintile, the higher the percentage of protein deficiency.

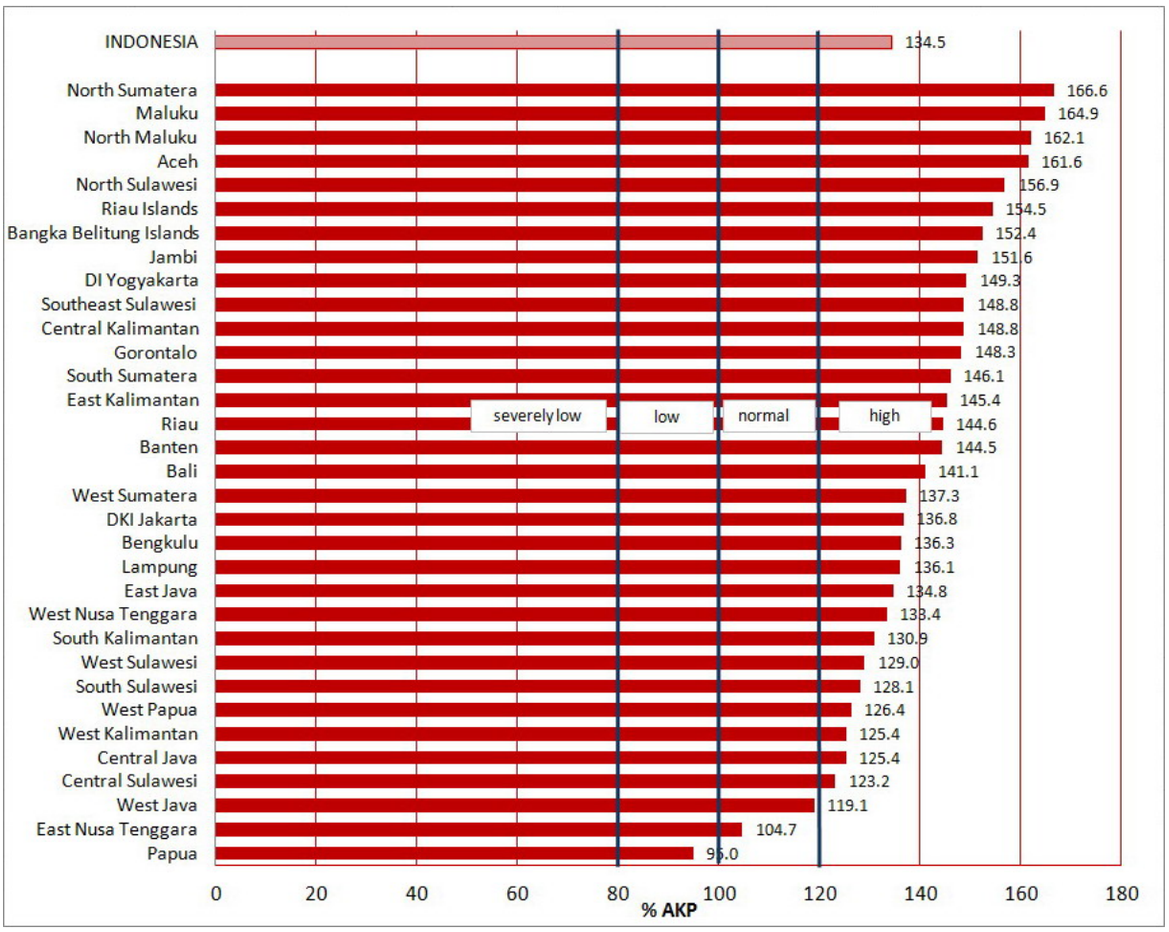
b) Average Protein Sufficiency Level on 0 – 59 Month Old Children

The average *AKP* (in grams) in each province is calculated based on the recommended *AKP* by age and sex as well as is adapted to the structure of samples in each province.

The national average of protein intake of population aged 0-59 months amounted to 36,8gram, higher than *AKP* (25.5 grams). Protein intake was higher in urban areas (39.2 grams) compared to that in rural areas (34.4 grams).Both in urban and rural areas exceeded the 25.5 grams set in *AKP*.

The average protein sufficiency level of population aged 0-59 months in Indonesia exceeded the *AKP*, reaching 134.5%. Of the 33 provinces, only Papua had protein sufficiency level below 100% (95%). The average protein sufficiency level was higher in urban areas (142.5%) than that in rural areas (126.2%).

FIGURE5.41
AVERAGE PROTEIN SUFFICIENCY LEVEL ON 0 – 59 MONTHS OLD CHILDREN 2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

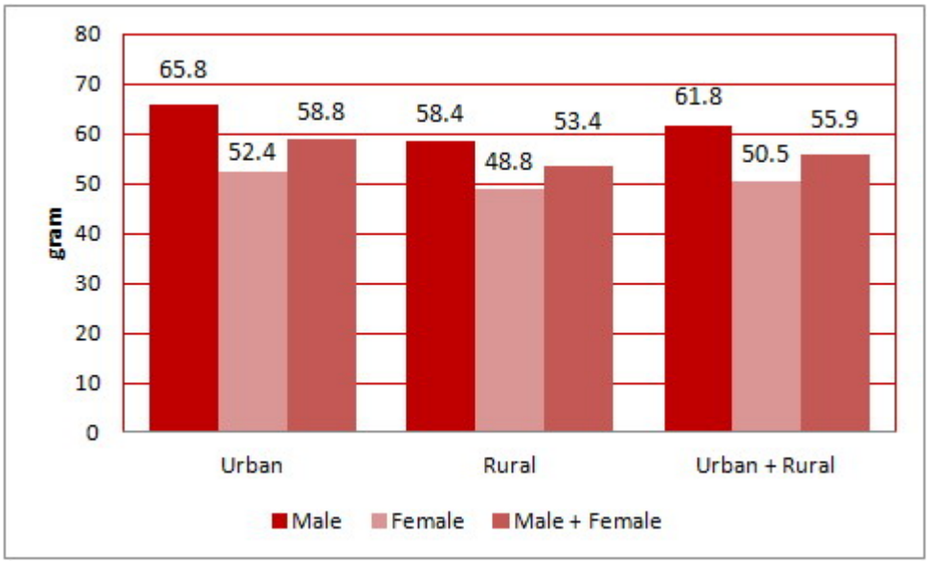
Only two provinces had averagely normal protein intake of children aged 0-59 months, namely West Java and East Nusa Tenggara. While with 30 other provinces, the protein intake of children aged 0-59 months wasgreater than 120% *AKP*.

c) Average Protein Intake and Protein Sufficiency Level on People >55 Years Old

The average protein intake of population aged >55 years old amounted to 55.9 grams; greater in male (61.8 grams) than in female (50.5 grams). The following figure details the average protein intake of population aged >55 years old by type of region and sex.

FIGURE5.42

AVERAGE PROTEIN INTAKE LEVEL ON PEOPLE >55 YEARS OLD BY TYPE OF REGION AND SEX, 2014



Source: National Institute of Health Research and Development, Ministry of Health RI, Total Diet Study, 2014

In contrast to the under-fives, the average protein sufficiency level of population aged >55 years old was lower. The average protein sufficiency level of population aged >55 years reached 93% of recommended protein intake. Male had higher average protein sufficiency level (96.9%) than female (89.3%).

As many as 19 provinces (58%) had averagely low protein sufficiency level of population aged >55 years, at <100% *AKP*. Meanwhile, Riau Islands was the only province with averagely normal protein sufficiency level, at ≥120% *AKP*.

CHAPTER VI

DISEASE CONTROL

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DISEASE CONTROL

Disease control refers to efforts to decrease the incidence, prevalence, morbidity or mortality of a disease to a locally acceptable level. Disease morbidity and mortality are indicators in assessing the health standard of a society.

Disease control discussed in this chapter shall mean control of communicable diseases, including those that infectdirectly, those controllable by immunization, vector-borne diseases and zoonoses, as well as health impact due to disasters.

A. DIRECT COMMUNICABLE DISEASES

1. Tuberculosis

Tuberculosis is a disease of global concern. Due to the variety of control measures under taken, the incidence and mortality from tuberculosis have decreased, but it is estimated that tuberculosis is still attacking 9.6 million people and caused 1.2 million deaths in 2014. India, Indonesia and China had the largest number of cases: 23%, 10% and 10% of the global total, respectively (WHO, Global Tuberculosis Report, 2015).

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*. It is spread from patients with sputum smear-positive TB (sputum with acid-fast bacillusdetected) when they release the microscopic bacteria in their droplets. Patients with smear-negative TB still have the possibility of transmitting the disease although with small rate of transmission.

The burden of disease caused by tuberculosis can be measured by Case Notification Rate (CNR), prevalence, and mortality/death.

a. Tuberculosis Prevalence

During 2013-2014, tuberculosis prevalence survey was conducted. It was aimed to quantify the prevalence of pulmonary tuberculosis with bacteriological confirmation in the population aged 15 years and over in Indonesia. Besides microscopic examination of sputum and chest X-ray, a number of other tests were added in the survey, namely of x-ray, GeneXpert and culture tests. With the addition of those TB tests in determining the number of cases of tuberculosis, more people with TB were detected than in previous years.

The prevalence of TB in 2014 amounted to 647/100,000 population, an increase compared with272/100,000 population in previous year.The incidence rate (IR) in 2014 amounted to 399/100,000 population, an increase compared with183/100,000 population in 2013. Likewise, the mortality rate in 2014 amounted to 41/100,000, an increase compared with 25/100,000 population in 2013 (WHO, Global Tuberculosis Report, 2015).

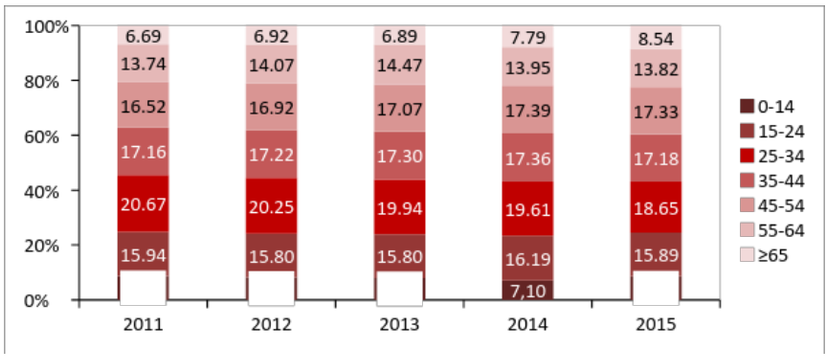
b. Tuberculosis Cases

In 2015, as many as 330,910 tuberculosis cases were found, an increase compared with2014 when 324,539 cases were found. The highest number of cases was reported in provinces with large populations, namely West Java, East Java and Central Java. Cases of tuberculosis in the three said provinces constituted 38% of all new cases in Indonesia.

By sex, the number of cases in male is higher than in female, with 1.5 times higher proportion. In each province through out Indonesia, the case is more common in male than in female.

By age group, cases of tuberculosis in 2015 were found most frequently in the age group of 25-34 years with 18.65%, followed by that of 45-54 years with 17.33% and that of 35-44 years with 17.18%. The proportion of cases of TB by age group is illustrated in Figure 6.1 below.

FIGURE 6.1
PROPORTION OF CASES OF TUBERCULOSIS BY AGE GROUP
2011-2015

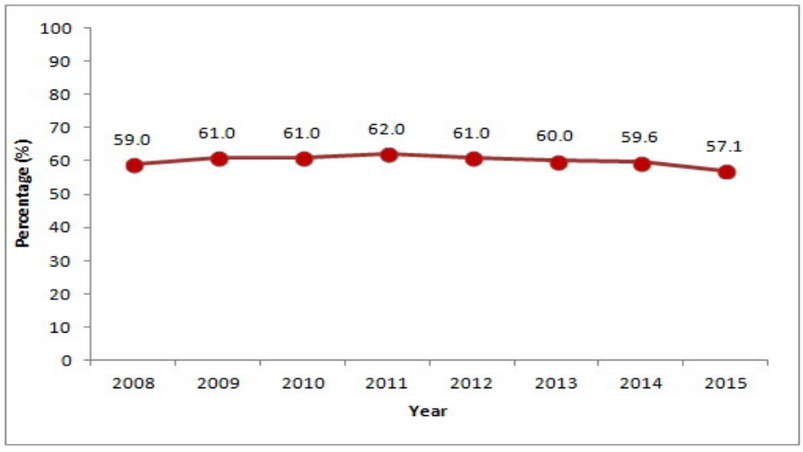


Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

c. Proportion of Bacteriologically Confirmed Pulmonary Tuberculosis Patients among All Recorded/Under Treatment Patients with Tuberculosis

The percentage of bacteriologically confirmed pulmonary tuberculosis among all recorded patients with pulmonary tuberculosis (both bacteriologically and clinically manifested) is an indicator that describes the priority of finding patients with communicable tuberculosis among all under treatment patients with tuberculosis. If the figure is lower than 70%, then the diagnosis is deemed to give less priority than required to finding patients who are contagious.

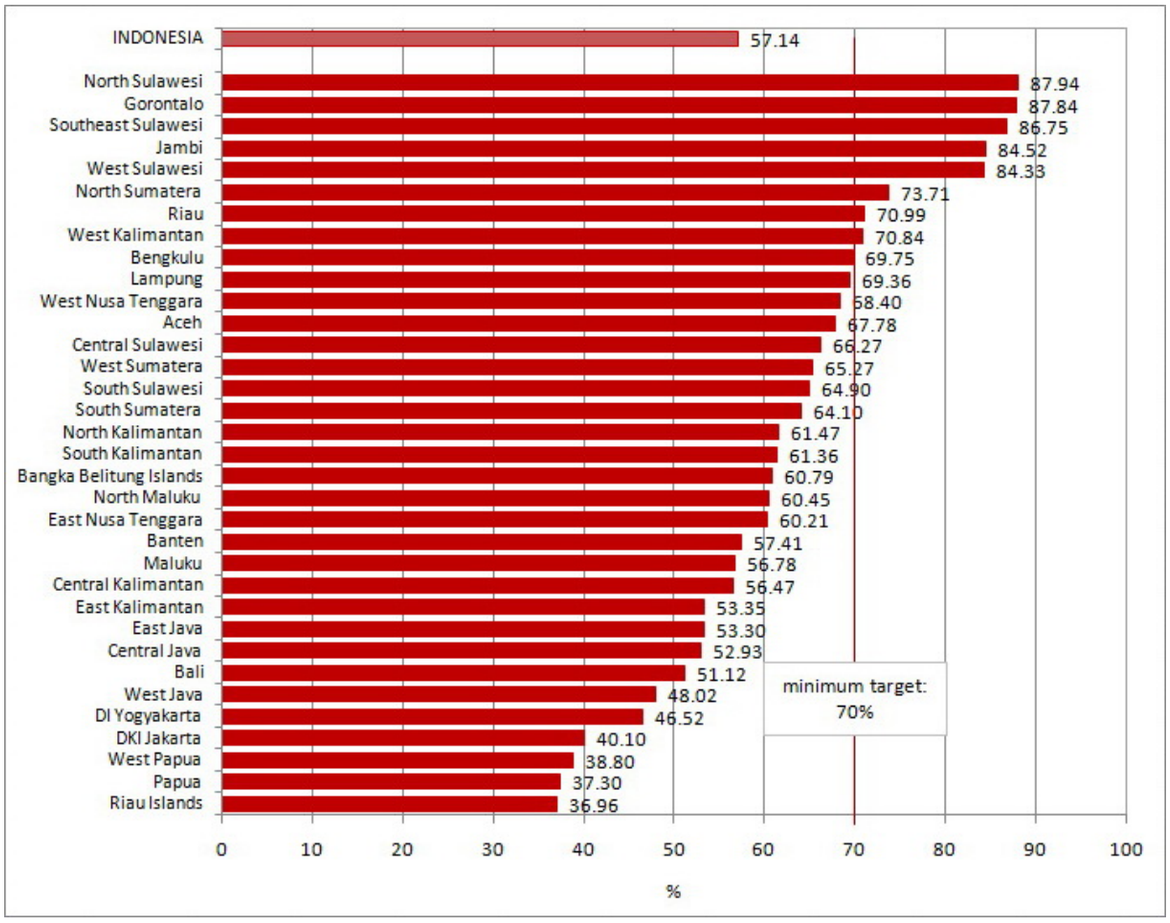
FIGURE 6.2
PROPORTION OF BACTERIOLOGICALLY CONFIRMED PULMONARY TUBERCULOSIS PATIENTS AMONG ALL RECORDED/UNDER TREATMENT PATIENTS WITH TUBERCULOSIS
2008-2015



Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

Figure 6.2 shows that up to 2015 (data per June 2016), the proportion of bacteriologically confirmed pulmonary tuberculosis patients among all recorded/under treatment patients with tuberculosis had not reached the expected target. This indicates that the diagnosis did not give enough priority to finding patients who were contagious in Indonesia. However, as many as eight provinces did reachthe target. Riau Islands is the province with the lowest proportion (37.0%) of bacteriologically confirmed pulmonary tuberculosis patients among all recorded/under treatment patients with tuberculosis.

FIGURE 6.3
PROPORTION OF BACTERIOLOGICALLY CONFIRMED PULMONARY TUBERCULOSIS PATIENTS AMONG ALL RECORDED/UNDER TREATMENT PATIENTS WITH TUBERCULOSIS BY PROVINCE, 2015



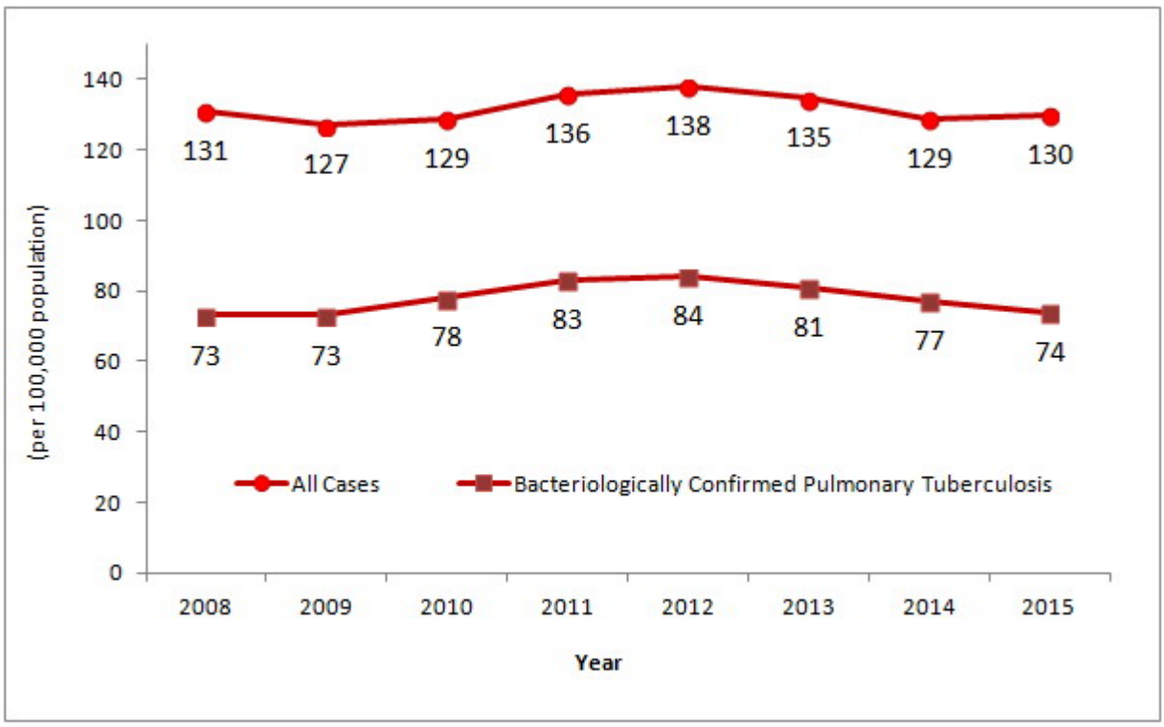
Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

d. Case Notification Rate (CNR)

Case notification rate refers to figures showing the number of new patients who are detected and recorded among 100,000 population in a particular area. This figure, if collected in series, will show a case detection trend from year to year in the region. This figure is useful to display increasing or decreasing trends of the detection of the patients in the region.

Figure 6.4 shows the notification rate of new cases of bacteriologically confirmed pulmonary tuberculosis and notification rate of all cases of tuberculosis per 100,000 population from 2008 to 2015. The notification rate of new cases of bacteriologically confirmed pulmonary tuberculosis in 2015 in Indonesia was 74 per 100,000 population, a decrease compared with that in 2014 which amounted to 77 per 100,000 population. While the notification rate of all cases of tuberculosis in 2015 amounted to 130 per 100,000 population, an increase compared with that in 2014 which amounted to 129 per 100,000 population.

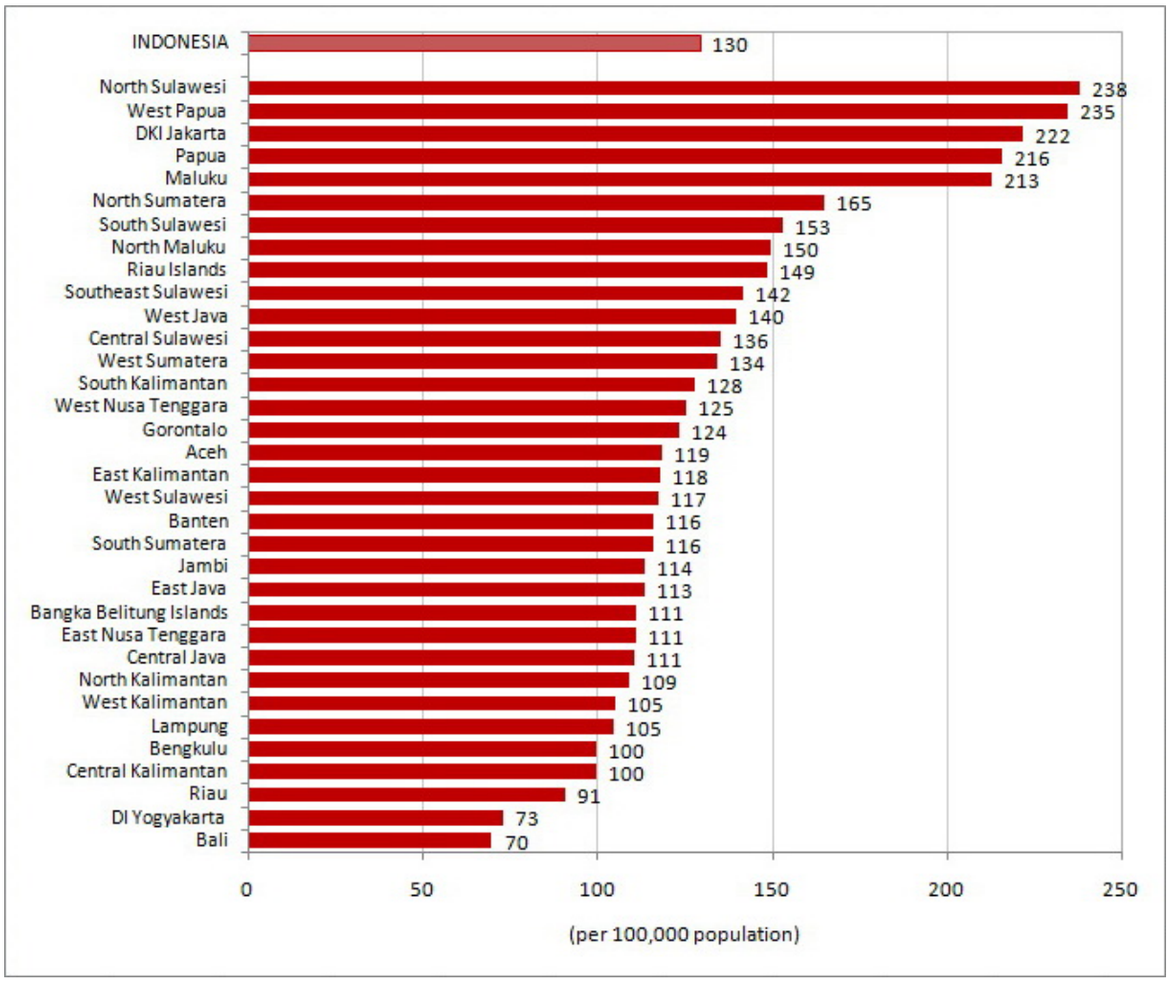
FIGURE 6.4
CASE NOTIFICATION RATE OF TUBERCULOSIS
PER 100,000 POPULATION, 2008 – 2015



Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

Figure 6.5 below shows the magnitude of the CNR of all cases of tuberculosis by province in 2015.

FIGURE 6.5
CASE NOTIFICATION RATE OF ALL CASES OF TUBERCULOSIS
PER 100,000 POPULATION BY PROVINCE, 2015



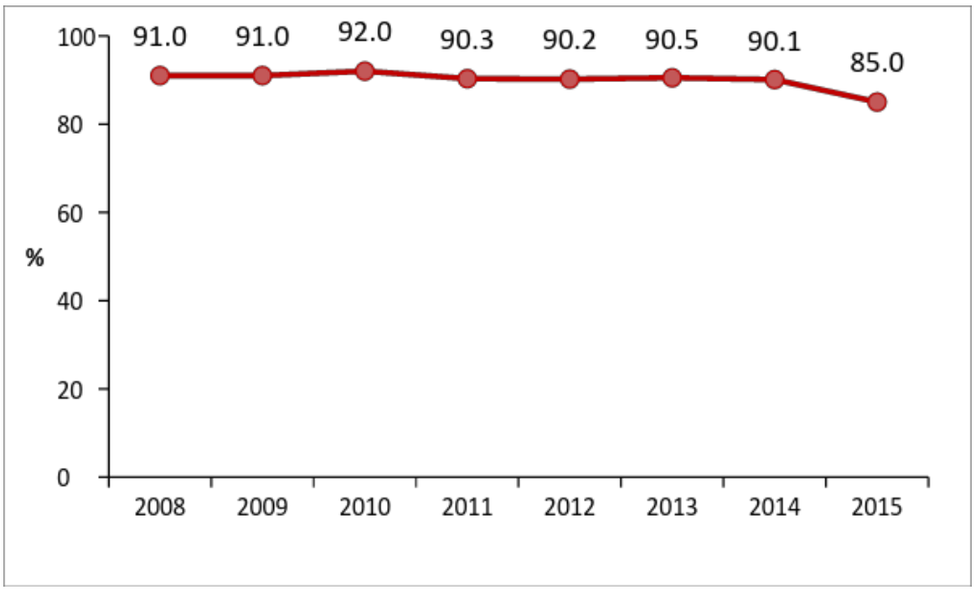
Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

Provinces with the highest CNR of all tuberculosis cases were North Sulawesi (238), West Papua (235), and DKI Jakarta (222). Provinces with the lowest CNR of all tuberculosis cases were Bali (70), DI Yogyakarta (73) and Riau (91). CNR is considered good if there was an improvement of at least 5% compared with the previous.

e. Success Rate

One of the efforts to control tuberculosis is treatment. The indicator used for evaluation of treatment is Success Rate. The success rate is obtained by adding the Cure Rate and complete treatment rate. The following figure shows the success rate from 2008 to 2015.

FIGURE 6.6
SUCCESS RATE OF PATIENTS WITH TUBERCULOSIS
IN INDONESIA, 2008 - 2015



Source: Directorate General of Disease Prevention and Control, Ministry of Health RI, 2016

Figure 6.6 shows a decrease in success rate in 2015 compared with previous years. In 2015, the success rate reached 85.0% (data per June 2016). WHO set the standard success rate at 85%.