

## HEALTH POLICIES UNDER THE SPECIAL AUTONOMY REGIME: AN EVALUATION USING HEALTH INDICATORS<sup>1</sup>

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### ABSTRACT

*Indonesian Law No.21/2001 on Special Autonomy regulates special autonomy given to the Province of Papua. Articles 59 and 60 of the law articulates the obligations of the provincial government to provide quality health care, prevent and manage endemic and life-threatening diseases, and improve the nutritional status of the people of Papua in cooperation with religious organizations, non-governmental organizations (NGOs) and other qualified establishments. This study intends to evaluate health policies under the special autonomy law and its effects towards health indicators such as doctor to patient ratio, number of health facilities, infectious diseases, nutritional status and health programs including antenatal care, vaccination, birth planning and labor assisted by health professionals by collecting and examining statistics on the topics above.*

*It reveals that budget allocated for health purposes is significantly increase from IDR 87,239,000,000 in 2002 (15.9% from total allocated budget) to 33,7% (862,383,000,000) in 2006 and has been utilized to improve health facilities both in quality and quantity.*

*Wide range available secondary data are used and analyzed. It is concluded that, physical health infrastructure were built across the provinces. however, the implementation of health policies under the 2001 Special Autonomy Law does not translate into satisfying results using known health indicators.*

**Keywords:** *special autonomy, health budget, health indicators, Papua.*

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## INTRODUCTION

As of 2001 the Province of Papua has been given special autonomy which is regulated by the Special Autonomy Law of 2001 (*Undang-Undang Republik Indonesia nomor 21 tahun 2001*). In 2003, the Province of Papua was divided into 2 provinces, Papua and West Papua, where special autonomy is extended to both provinces. As written in the law, the province of Papua is the province formerly known as Irian Jaya and special autonomy is defined as authority given to the province of Papua to manage and regulate the needs of the local community and people according to their own will and aspiration, based on the basic rights of the people of Papua.

One of those basic rights is the right to health and receiving quality health care. Articles 59 and 60 of the 2001 Law on Special Autonomy articulates the obligations of the provincial government to provide quality health care, prevent and manage endemic and life-threatening diseases, and improve the nutritional status of the people of Papua in cooperation with religious organizations, non-governmental organizations (NGOs) and other qualified establishments.

Papua and West Papua as provinces in the Republic of Indonesia both aim to be able to fulfill the Millennium Development Goals (MDGs) 2015 set by the United Nations which are eradicating extreme poverty and hunger, achieving universal primary education, promoting gender equality and empowering women, reducing child mortality, improving maternal health, combating malaria, HIV/AIDS and other diseases, ensuring environmental sustainability, and achieving global partnership for development. Some of the MDGs are closely related to the health sector. Improving the health sector in Papua and West Papua is expected to be able to result in health situations which are close to standards of the MDGs and in turn will better the overall condition and welfare of the people of Papua.

After more than a decade of its implementation, it is a given that an evaluation should be made on health care policies implemented in Papua under this law. This paper intends to point out health policies made in the health sector after the implementation of the Special Autonomy Law of 2001 and the most recent health situations in Papua and West Papua, what challenges remain, what has been done so far, and more importantly how to improve the overall condition of health care in Papua and West Papua.

## MATERIAL AND METHODS

This study intends to evaluate health policies under the special autonomy law and its effects towards health indicators such as doctor to patient ratio, number of health facilities, infectious diseases, nutritional status and health programs including antenatal care, vaccination, birth planning and labor assisted by health professionals by collecting and examining statistics on the topics above.

Health related policies in Papua and West Papua are policies concerning funding and development of the health sector in Papua and West Papua as well as health programs. Providing available health care professionals and medical supplies also require government will and therefore are accounted as government policies as well.

Health indicators used in this paper are focused on those closely related to the Millennium Development Goals (MDGs) 2015 which concentrate on reducing prevalence of communicable diseases, reducing child mortality ratio, and promoting maternal health. The health indicators used in this study are as follows (1) infant death ratio, (2) children under 5 years death ratio, (3) maternal death ratio, (4) HIV/AIDS infection prevalence, (5) tuberculosis case detection rate, (6) tuberculosis success rate, (7) incidence rate of measles, (8) number of public health centers (*Puskesmas*), (9) number of hospitals, (10) doctor to patient ratio, (11) registered nurse to patient ratio, (12) midwife to patient ratio, (13) coverage of active birth control users, (14) coverage of complete ante natal care visits (K4), (15) coverage of labor assisted by medical professionals, (16) coverage of complete neonatal visits, (17) coverage of vaccination against measles, and (18) coverage of vitamin A supplementation.

Material for this paper is gathered from various written sources from several government offices such as the Ministry of Health, *Badan Pusat Statistik*, and the provincial government of the provinces of Papua and West Papua and is incorporated in this paper which is an observational study.

## DATA AND INFORMATION

Papua faces many challenges in the health sector. Human resources are limited, health care in primary health care centers still need improvement, limited supply of medication and other health supplies, lack of knowledge of a healthy lifestyle among the people of Papua and also ineffective prevention and management of infectious diseases.

The Indonesian Demography and Health Survey (*Survei Demografi dan Kesehatan Indonesia*) in 2012 found there were 74 infant deaths per 1,000 live births in West Papua while the number was 54 per 1,000 live births in Papua. MDGs (Millennium Development Goals) 2015 points out that the target is  $\leq 23$  per 1,000 live births). Compare to other provinces in Indonesia, Papua ranks at the 27<sup>th</sup> out of 33 provinces, while West Papua is at the bottom. Although the numbers reflect conditions 10 years before the survey was held, this is the most recent information available.

In terms of the death in children under the age of 5 in Papua and West Papua was 115 and 109 per 1,000 live births respectively (MDGs 2015 target is  $\leq 32$  per 1,000 live births). This make Papua and West Papua are at the bottom of national rank. There is no clear picture on maternal death in the Papua and West Papua provinces. However, the World Health Organization, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), The World Bank and United Nations Population Division (UNPD) through the Maternal Mortality Estimation Inter-Agency Group (MMEIG) found that maternal mortality ratio (MMR) in Indonesia decreased from 600 per 100,000 live births in 1990, 420 per 100,000 live births in 1995, 340 per 100,000 in 2000, 270 per 100,000 live births in 2005 to 220 per 100,000 live births in 2010.<sup>3</sup> This number does not represent the condition in all of Indonesia. In eastern Indonesia, especially Papua where the highland terrain is a natural

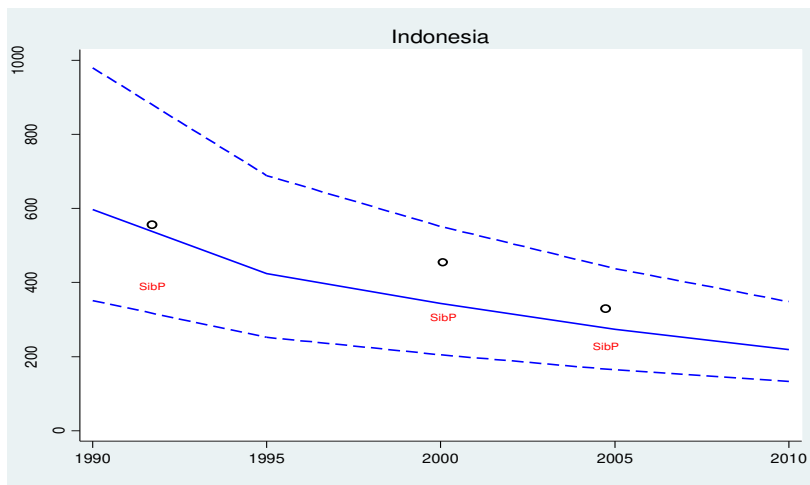
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<sup>3</sup> WHO, UNICEF, UNFPA and The World Bank Estimates. 2012. *Trends in Maternal Mortality 1990-2010*.

barrier, quality of health care differs between districts, and access to health care is limited, the ratio is projected to be two or three times the national maternal mortality ratio <sup>4</sup>.

In the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)*, WHO defines maternal death as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. The maternal mortality ratio (MMR) is defined as the number of maternal deaths in a population per 100,000 live births; thus it depicts the risk of maternal death relative to the number of live births <sup>5</sup>.

**Chart-1. Maternal Mortality in Indonesia, 1990-2010**

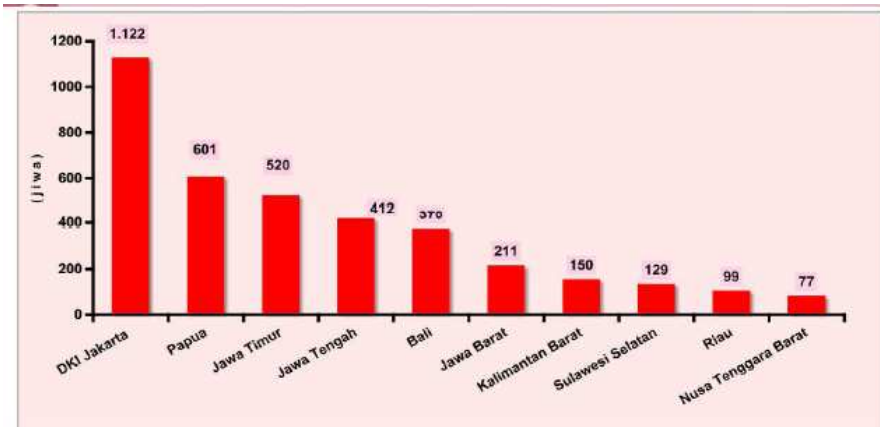


In terms of AIDS, Papua has the second most cases of newly detected AIDS patients in Indonesia as of 2011 with the cumulative case numbers rapidly increasing from 388 in 2003 to 4,449 in 2011. The following **Chart 2** and **Chart 3** below show the newly detected HIV/AIDS Infection in Indonesia in 2011 and HIV/AIDS Infection Cases in Papua Province in 2003-2011.

<sup>4</sup> IRIN, Indonesia. 2012. *Maternal Mortality Ratio Stagnates*.

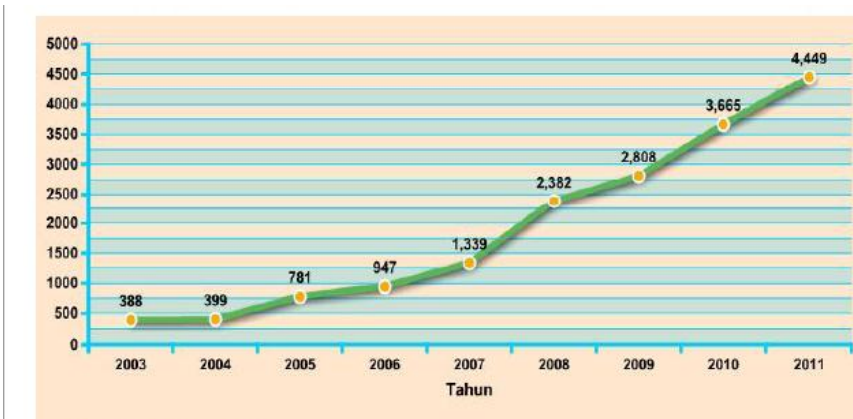
<sup>5</sup> WHO, UNICEF, UNFPA and The World Bank Estimates. 2012. *Trends in Maternal Mortality 1990-2010*.

**Chart-2. Newly Detected HIV/AIDS Infection in Indonesia in 2011**



Sumber: Ditjen PP&PL, Kemenkes RI

**Chart-3. HIV/AIDS Infection Cases in Papua Province, 2003-2011**



Sumber: Ditjen PP-PL, Kemenkes RI

Concerning other infectious diseases, such as tuberculosis, Papua and West Papua both fall under the national case detection rate which is 42.32%. Tuberculosis detection rate is the percentage of newly notified tuberculosis cases (including relapses) to estimated incident cases.<sup>6</sup> As of June 2012, the tuberculosis detection rate in Papua is 24.79% while in West Papua the number is 16.92%. Such figures put both provinces at number 22 and 31 of the national rank respectively.

Another indicator is the tuberculosis success rate which is the percentage of new, registered smear-positive (infectious) cases that were cured or in which full course of treatment was completed.<sup>7</sup> In 2012, the Indonesian national tuberculosis success rate was 90.8%, above the Ministry of Health of the Republic of Indonesia’s Renstra (*Rencana Strategis*) target of 87%. In the same year, the tuberculosis success rate in Papua was 78.4% and in West Papua 71%, the lowest in Indonesia. Such figures put Papua and West Papua at number 1 and 3 of the national ranks respectively.

<sup>6</sup> World Health Organization. 2013. *Global Tuberculosis Control Report*

<sup>7</sup> *Ibid*

Concerning other infectious diseases, Papua's incidence rate of measles infection in 2011 was 2.88 per 100.000 population while West Papua's incidence rate was 1.84 per 100.000 population. The national incidence rate was 9.22 per 100.000 population. Such figures put Papua and West Papua at the top 5 and 6 follow Maluku, Sulawesi Barat Nusa Tenggara Barat and Sumatera Barat. There are no recent statistic information of dengue infection morbidity for both Papua and West Papua.

Many health policies have been made under the Special Autonomy Law. These policies have been implemented slightly differently in each city or regency. However, health policies under the Special Autonomy Law are mostly directed towards increasing the scope and quality of health care through (1) Disease Eradication Programs, (2) Prevention and Management of HIV/ AIDS infection, (3) Increasing human resources in health care, both medics and paramedics, (4) Health care in public health centers (*Puskesmas*), (5) Health care in hospitals, (6) providing medicine, and (7) improvement of nutrition and providing a healthy environment.<sup>8</sup>

The main goals of implementing these policies are (1) cooperation between the government and private sectors regarding health care, (2) improvement of health, (3) to achieve life expectancy of 70 years old, (4) recruitment and training of medics and paramedics to achieve a more professional standard, (5) involvement of the community in the prevention and management of HIV/AIDS infection and also in the rehabilitation of those infected, and (6) to widen the scope of health care and improve health care management.

In order to reach such goals, an allocation of funds has been appropriated for the health sector. The health budget has been used to fund 8 priority programs which are (1) establishing development programs in the health sector, (2) improving human resources in the medical field, (3) improving health care availability to the community, (4) advance professionalism in the management of public health centers (*Puskesmas*) and its affiliations, (5) empowering the community in health related issues, (6) increase prevention and eradication of infectious diseases and also the improvement of family health, (7) increase awareness on sanitation, and (8) understand the need of alternative medicine namely medicinal herbs and plants.

In 2002, 15.9% of special autonomy funds (IDR 87,239,000,000) was allocated for health purposes. The budget became 18.7% (IDR 85,191,000,000), 14.6% (IDR 111,898,000,000), 28.3% (IDR 62,724,000,000), and 33.7% (862,383,000,000) in 2003, 2004, 2005 and 2006 respectively and has been utilized to improve health facilities both in quality and quantity. In 2005 and 2006, as much as 70.69% and 46.67% of the health budget went into building national standard hospitals in Jayapura, Sorong and Biak which was intended to minimize the need to refer patients outside of the provinces of Papua and West Papua which is costly.<sup>9</sup>

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<sup>8</sup> Djojosoekarto, Agung, JRG Djopari, et al. 2008. *Kinerja Otonomi Khusus Papua*. 1st ed. Jakarta: Kemitraan.

<sup>9</sup> *Ibid.*

**Table-1. Allocation of Special Autonomy Funds in the Health Sector**

	Year				
	2002	2003	2004	2005	2006
Special Autonomy Funds*	1.382.300	1.539.560	1.642.617	1.775.312	2.913.218
Health Allocation*	87,239	85,191	111,898	62,724	862,383
%	15,9	18,7	14,6	28,3	33,7

\* In million IDR

The utilization of Special Autonomy Funds in the health sector varies from one *kabupaten* to another. In Kabupaten Sorong which has allocated 51.96 billion IDR, for instance, the funds has mainly used for building infrastructure (*Puskesmas*, official residence for *Kepala Puskesmas* and referral hospital in Aimas), operation and maintenance Sorong General Hospital and *Puskesmas*, education and training, and for conducting three health programs these are improvement of basic health care services, management of malnutrition and *Posyandu* and management of infectious diseases and HIV/AIDS. There is no funds is used for drugs and medical supplies.

In Kabupaten Nabire who received 8.02 billion IDR, used the funds for construction of Health Department office, operational cost of *Puskesmas*, establishment of nursing school, ensuring medicinal supplies and other consumables in *Puskesmas* and hospitals, and developing program disease prevention and creating a healthy environment. Meanwhile in Kabupaten Pegunungan Bintang who received only 6.04 billion IDR, using the fund for massive construction such as Health Clinic in Pepera district, construction of doctor housing in Kwirok, construction of branch public health center (*Pustu*) in Batom, construction of *Puskesmas* employee barrack in Oksibil, and provides aircraft for *Pusling* as well as for rehabilitation of doctor housing. In addition the fund is also has been used for training of local health cadres and immunization officers, technical guidance and money program. In terms of drugs and medical supplies, the money has been utilized for supply of medicine, medical and non-medical supply, distribution of medicine and medical supplies. The funds has also utilized for developing programs immunization, tuberculosis management, filariasis survey in 12 districts, referrals for hospitalizations and emergency cases, reproductive, pediatric and maternal health care and malnutrition management.

In *Kabupaten Kerom* the funding is uncertain, but there is a monetary incentive for doctors and paramedics, supply of medicine and other medical necessities especially in *Puskesmas* and *Pustu*, as well as programs to prevent of infectious diseases and to improve nutrition intake in the community. While in *Kabupaten Merauke*, there is no information about amount of allocated funds. However, there are construction activities i.e. upgrading *Pustu* into *Puskesmas* and construction of *Pustu* and *Polindes*. In terms of Human Resources Development there are lots of activities such as technical guidance, analysis of need for health care providers, selection of health care providers, furthering education, training of health care providers, establishing Diploma Program in Nursing, evaluation and accreditation and license monitoring of health care providers. There are also numerous range from health care in rural areas, disease prevention and eradication (e.g. malaria, dengue, filariasis, diarrhea, pneumonia, STDs, tuberculosis, leprosy, frambosia, vermin infection), surveillance of plague potential, surveillance of Acute Flaccid Paralysis, routine immunization,

immunization for school children, tetanus vaccination in fertile age women, license monitoring of medical distributors (pharmacies), health counseling through various channels including mass media, health advocacy, improving nutrition (surveillance of nutritional status of high risk groups), management of malnutrition, vitamin A supplementation, anemia management, and *Posyandu, Lomba Balita Sejahtera Indonesia*).

Increasing the quantity of public health centers (*Puskesmas*) and also the number of human resources in the medical field seem to be the main strategy in health management since the implementation of the Special Autonomy Law of 2001 (*Undang-Undang Republik Indonesia nomor 21 tahun 2001 tentang Otonomi Khusus bagi Provinsi Papua*). In 2000, Papua had 200 public health centers (*Puskesmas*) and 784 branch public health centers (*Pustu*). By 2012, the provinces of Papua and West Papua jointly have 371 public health centers, 266 in Papua and 105 in West Papua. There are currently 799 branch public health centers, 550 in Papua and 249 in West Papua. **Table-2** below illustrates numbers of public health centers in Papua and West Papua from 2000 to 2012.

**Table-2. Number of Public Health Centers in Papua and West Papua Provinces 2000-2012<sup>10</sup>**

YEAR	WEST PAPUA		PAPUA	
	Number of Public Health Centers	Number of Branch Public Health Centers	Number of Public Health Centers	Number of Branch Public Health Centers
2000	0	0	200	784
2001	0	0	221	800
2002	0	0	215	844
2003	0	0	217	789
2004	55	236	167	546
2005	60	233	168	551
2006	81	0	236	0
2007	83	0	246	0
2008	96	352	236	649
2009	105	249	266	550
2010	105	249	266	550
2011	105	249	266	550
2012	105	249	266	550

<sup>10</sup> bankdata.depkes.go.id



Pusdatin Kemenkes mentions that per June 2012 there were 360 public health centers (*Puskesmas*) in the province of Papua distributed across *kabupatens*. The same source found per December 2012 there were 128 public health centers (*Puskesmas*) in West Papua. They are shown in more elaborated figures in **Table-3** and **Table-4** below.

**Table-3. Number of Public Health Centers in the Province of West Papua in December 2012**

No	KAB/KOTA	PUSKESMAS PERAWATAN	PUSKESMAS NON PERAWATAN	JUMLAH
1	Kab. Fakfak	7	2	9
2	Kab. Kaimana	3	5	8
3	Kab. Teluk Wondama	3	3	6
4	Kab. Teluk Bintuni	4	11	15
5	Kab. Manokwari	10	14	24
6	Kab. Sorong Selatan	4	9	13
7	Kab. Sorong	1	16	17
8	Kab. Raja Ampat	3	16	19
9	Kab. Tambrauw	1	4	5
10	Kab. Maybrat	3	3	6
11	Kota Sorong	0	6	6
TOTAL		39	89	128

Sumber : Pusdatin, Kemenkes RI, 2012

**Table-4. Number of Public Health Centers in the Province of Papua in 2012**

NO	KAB/KOTA	PUSKESMAS PERAWATAN	PUSKESMAS NON PERAWATAN	JUMLAH
1	Kab. Merauke	11	9	20
2	Kab. Jayawijaya	2	10	12
3	Kab. Jayapura	6	13	19
4	Kab. Nabire	6	18	24
5	Kab. Kep. Yapen	4	6	10
6	Kab. Biak Numfor	5	12	17
7	Kab. Paniai	2	16	18
8	Kab. Puncak Jaya	2	6	8
9	Kab. Mimika	3	10	13
10	Kab. Boven Digoel	3	13	16
11	Kab. Mappi	6	5	11
12	Kab. Asmat	4	7	11
13	Kab. Yahukimo	4	14	18
14	Kab. Pog. Bintang	5	24	29
15	Kab. Tolikara	7	18	25
16	Kab. Sarmi	2	4	6
17	Kab. Keerom	3	5	8
18	Kab. Waropen	3	7	10
19	Kab. Supiori	2	3	5
20	Kab. Mamberamo Raya	2	5	7
21	Kab. Nduga	1	7	8
22	Kab. Lanny Jaya	3	7	10
23	Kab. Mamberamo Tgh	0	4	4
24	Kab. Yalimo	2	5	7
25	Kab. Puncak	0	8	8
26	Kab. Dogiyai	2	8	10
27	Kab. Intan Jaya	1	5	6
28	Kab. Deiyai	1	7	8
29	Kota Jayapura	1	11	12
TOTAL		93	267	360

Compare to other provinces in Indonesia, Papua and West Papua have more public health centers (*Puskesmas*) than several recently established provinces such as Gorontalo, North Maluku and West Sulawesi although both are still far from West Java which has 1,008 public health centers in its region. In 2012, 29 hospitals provide health care in the 28 regencies and 1 city of the province of Papua. In West Papua, the numbers were 13 hospitals against 10 regencies and 1 city of the province of West Papua.<sup>11</sup>

<sup>11</sup> Ditjen Bina Upaya Kesehatan Kemkes RI, 2012. *Papua*.

**Table-5. Hospitals in the Province of West Papua in 2013**

NO	KABUPATEN/KOTA	RSU	RSK	Total RS
1	Kab. Fak-Fak	2	0	2
2	Kab. Kaimana	4	0	4
3	Kab. Teluk Wondama	1	0	1
4	Kab. Teluk Bintuni	1	0	1
5	Kab. Manokwari	0	0	0
6	Kab. Sorong Selatan	1	0	1
7	Kab. Sorong	0	0	0
8	Kab. Raja Ampat	0	0	0
9	Kab. Tambrau	0	0	0
10	Kab. Maybrat	0	0	0
11	Kota Sorong	4	0	4

Sources: *Pusdatin Kemenkes RI, 2012.*

Doctor to patient ratio in 2011 in Papua and West Papua respectively were 21.8 and 23.3 per 100,000 population, both were above the national ratio of 13.7 per 100,000 population. The national ratio has not reached the target of 40 per 100,000 population and neither have any of the provinces in Indonesia. With this number West Papua is at the 8<sup>th</sup> of the national ranks while Papua is at the 10<sup>th</sup>.

Regarding the target of registered nurses to patient ratio is 117 to 100,000 population. In 2011, the national ratio was 92.8 per 100,000 population while in Papua the number was 193.8 per 100,000 population and in West Papua the ratio was 245.6 per 100,000 population. The registered nurse to patient ratio in both provinces were above the national ratio and also above the intended target. Which means that West Papua is at the top 4 of national ranks following Maluku Utara, Maluku, and Kalimantan Barat. While Papua is at the top 10 of the national ranks. In terms of midwife to patient ratio in 2011 in Papua was 72.4 per 100,000 population while in West Papua it was 78.9 per 100,000 population. Both numbers are above the national ratio of 52.2 per 100,000 population but still under the target ratio of 100 per 100,000 population. In 2011, only the provinces of Bengkulu and Nanggroe Aceh Darussalam were able to achieve the target ratio.

Concerning health programs, both Papua and West Papua score is under the national percentage of active birth control users of 75.96% in 2011. Papua had the lowest coverage of active birth control users that year with only 49.08 % while West Papua was close to the national percentage with 75.44%. While K4 or ante natal care visits are visits done by expecting mothers to health care providers to monitor their pregnancy, once during the first trimester, once during the second trimester and twice during the last trimester. Ante natal care visits (K4) in Papua and West Papua were the lowest two in the nation (50.03% and 50.72% respectively) in 2011. That year, the national percentage was 88.27%, above the

target intended in the Renstra (*Rencana Strategis*-Strategic Plan) of the Health Ministry which was 88%. In terms of percentage of labor assisted by health professionals were also significantly low Papua and West Papua in 2011 (53.42% and 61.41% respectively). The national percentage was 86.38% while the target intended in the 2011 Renstra (*Rencana Strategis*-Strategic Plan) was 86%.

Complete neonatal visits (*Kunjungan Neonatus Lengkap*) are health care given to the neonate at least 3 times during the neonate phase (0-28 days). It is done once during the first 6 to 48 hours, once at 3 to 7 days old and once at 8 to 28 days old to monitor the condition of the neonate. In 2011, the percentage of complete neonatal visits was 84.18% while in Papua it was 18.86% and in West Papua the number was 32.64%, the two lowest in the country. While vaccination is a measure taken to prevent infectious diseases. In 2011, the national percentage of recipients of measles vaccination was 93.65% of the population, above the target set by the World Health Organization (WHO) which is 90%. However, in the same year, the percentage was 69.9% in Papua and 87.21% in West Papua.

Measles is a highly contagious viral disease, which affects mostly children, caused by a virus in the paramyxovirus family. The measles virus normally grows in the cells that line the back of the throat and lungs. It is transmitted via droplets from the nose, mouth or throat of infected persons. In 1980, before widespread vaccination, measles caused an estimated 2.6 million deaths each year. It remains one of the leading causes of death among young children globally, despite the availability of a safe and effective vaccine. Approximately 158,000 people died from measles in 2011 – mostly children under the age of five. Accelerated immunization activities have had a major impact on reducing measles deaths. Since 2000, more than one billion children in high risk countries were vaccinated against the disease through mass vaccination campaigns — about 225 million of them in 2011. Global measles deaths have decreased by 71% from an estimated 548,000 to 158,000.<sup>12</sup>

Most measles-related deaths are caused by complications associated with the disease. Complications are more common in children under the age of five, or adults over the age of 20. Severe measles is more likely among poorly nourished young children, especially those with insufficient vitamin A, or whose immune systems have been weakened by HIV/AIDS or other diseases. The most serious complications include blindness, encephalitis (an infection that causes brain swelling), severe diarrhea and related dehydration, ear infections, or severe respiratory infections such as pneumonia. As high as 10% of measles cases result in death among populations with high levels of malnutrition and a lack of adequate health care. Women infected while pregnant are also at risk of severe complications and the pregnancy may end in miscarriage or preterm delivery. People who recover from measles are immune for the rest of their lives.<sup>13</sup>

Vitamin A deficiency in children can cause an increased risk of death, blindness and illness, especially from measles and diarrhea. As part of the global call to action, the UN Special Session on Children in 2002 set as one of its goals the elimination of vitamin A deficiency and its consequences by the year 2010. The strategy to achieve this goal is to

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<sup>12</sup> World Health Organization. February 2013. *Measles*.

<sup>13</sup> *Ibid*

ensure that young children living in areas where the intake of vitamin A is inadequate receive the vitamin through a combination of breast feeding, dietary improvement, food fortification and supplementation (WHO, 2003). In 2011, Vitamin A supplementation in children under 5 years of age in Papua (23.79%) and West Papua (32.79%) were also far from the national mean of 82.66%.

## DISCUSSION

Policies made concerning the health sector under the provision of the Special Autonomy Law of 2001 are focused on achieving 8 targets which are (1) providing adequate health facilities and infrastructure, (2) decreasing the occurrence of infectious diseases, (3) adding the number of medical practitioners and paramedics and evenly distributing them among all the public health centers (*Puskesmas*), (4) reducing maternal and child mortality rate, (5) reducing morbidity in the community, (6) promoting awareness of environmental health in the community, (7) optimizing and improving mobile public health center (*Pusling-Puskesmas Keliling*) facilities, and (8) improving management of *Puskesmas* and its affiliations.

After the implementation of the Special Autonomy Law in 2001, there has been significant increase in the quantity of health infrastructure. From 200 public health centers (*Puskesmas*) prior to the implementation of the Special Autonomy Law, the number became 105 public health centers in West Papua and 266 in Papua, adding to a total of 371 public health centers in the year 2012.<sup>14</sup> Another source within the Health Ministry (*Pusdatin Kemenkes*-Center for Data and Information of the Health Ministry of the Republic of Indonesia) found different numbers, by 2012 there were 360 public health centers in Papua and 128 in West Papua. The distribution of public health centers in the province of Papua in 2012 found the Mamberamo Tengah regency to have the least with 4 public health centers while Pegunungan Bintang regency had the most with 29 public health centers.<sup>15</sup> There were 29 hospitals in Papua<sup>16</sup> and 11 in West Papua in 2012.<sup>17</sup> An allocation of Special Autonomy funds went into constructing various health facilities such as public health centers, a hospital in Aimas, a health clinic in Pepera, and employee housing and facilities in the regencies of Sorong, Nabire, Pegunungan Bintang, Kerom and Merauke.<sup>18</sup>

Apart from the increase of quantity of public health centers (*Puskesmas*) both in Papua and also in West Papua, it can also be seen that in comparison to other provinces, Papua and West Papua seem to fare quite well. Compared to other provinces, in terms of quantity of public health centers Papua and also West Papua have more public health centers than several other provinces especially the more recently established provinces such as North Maluku, West Sulawesi and Gorontalo. However, Papua and West Papua are a vast region.

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<sup>14</sup> bankdata.depkes.go.id

<sup>15</sup> Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia. 2013.

<sup>16</sup> Ditjen Bina Upaya Kesehatan Kemenkes RI- Directorate General of Health Efforts.

<sup>17</sup> Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia. 2013.

<sup>18</sup> Djojosoekarto, et al. *Kinerja Otonomi Khusus Papua*. 1st ed. Jakarta: Kemitraan, 2008.

Papua is about 319,036.05 km<sup>2</sup> <sup>19</sup> which means there is 1 public health center for every 1,199.38 km<sup>2</sup>. In West Papua which is 115,363.50 km<sup>2</sup> <sup>20</sup>, there is 1 public health center for every 1,098.7 km<sup>2</sup>. West Java has the most number of public health centers in Indonesia with 1,008 public health centers in the region which is approximately 34,816.96 km<sup>2</sup> <sup>21</sup>. Therefore 1 public health center in West Java covers an area of 34.54 km<sup>2</sup>, a stark contrast from the situation in Papua and West Papua.

West Java had a population of 45,826,775 in 2012 (Badan Pengelolaan Lingkungan Hidup, 2013) while Papua in 2010 had a population of 2,833,381 <sup>22</sup> and West Papua in 2007 had a population of 722,981 (Pemerintah Propinsi Papua Barat, 2010). This signifies that 1 public health center serves 45,463 population in West Java, 10,651 population in Papua and 6,885 population in West Papua. Although a public health center in West Java may serve more of the population than that in Papua or West Papua, the geographical properties of Papua and West Papua remain a challenge in providing health care to even a limited portion of the population due to the vast area, minimal or no infrastructure, and difficult terrain to travel. The current number of public health centers in Papua and West Papua are therefore still insufficient to make health care available to the majority of the population.

Mobile public health centers (*Pusling*) are key to providing health care to communities in the most rural areas. The harsh geography of Papua and West Papua and the lack or absence of infrastructure connecting districts become a great hurdle in optimizing *Pusling*. In the regency of Pegunungan Bintang *Pusling* utilizes aircrafts that are costly and may become an economic burden to the local government. In order to lower the cost of *Pusling*, in the long term infrastructure building is essential.

The number of hospitals in both Papua and West Papua are also far from ideal. With only 29 in Papua and 13 in West Papua, referral from extremely rural areas still becomes a near impossible feat. The limited number of hospitals also presents the necessity to refer patients to larger centers outside of Papua. Transportation of such patients can be costly and also time consuming. Although health infrastructure construction is one of the focal points of development in the health sector ever since the implementation of the Special Autonomy Law of 2001, the speed of development has not yet been able to meet the need for sufficient and adequate health facilities.

Doctor to patient ratio in 2011 in Papua and West Papua respectively were 21.8 and 23.3 per 100,000 population, both were above the national ratio of 13.7 per 100,000 population. The national ratio has not reached the target of 40 per 100,000 population and neither have any of the provinces in Indonesia. The target of registered nurses to patient ratio is 117 to 100,000 population. In 2011, the national ratio was 92.8 per 100,000 population while in Papua the number was 193.8 per 100,000 population and in West Papua the ratio was 245.6 per 100,000 population. The registered nurse to patient ratio in both provinces were above the national ratio and also above the intended target. Midwife to patient ratio in 2011 in Papua was 72.4 per 100,000 population while in West Papua it was 78.9 per 100,000

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<sup>19</sup> Wikipedia, 2013.

<sup>20</sup> Badan Pusat Statistik Provinsi Papua Barat. 2013.

<sup>21</sup> Badan Pengelolaan Lingkungan Hidup Jawa Barat. 2013.

<sup>22</sup> Wikipedia, 2013.

population. Both numbers are above the national ratio of 52.2 per 100,000 population but still under the target ratio of 100 per 100,000 population. In 2011, only the provinces of Bengkulu and Nanggroe Aceh Darussalam were able to achieve the target ratio.

Doctor to patient ratio and midwife to patient ratio in 2011 in the provinces of Papua and West Papua were all above the national ratio albeit under the intended target while the registered nurse to patient ration was above the national ratio and also the target ratio. However, these numbers do not represent the situation in the field. Although the number seems sufficient, each doctor, registered nurse and midwife in Papua and West Papua serve a small number of the population but this population is sporadically located among a vast area of over 400,000 km<sup>2</sup>. The composition of doctors and other medical practitioners are also not mentioned. As in other provinces, medical practitioners comprise of civil servants, military personnel, private sector workers, Non-Governmental Organizations workers, contract employees (either hired by the government such as PTT (*Penempatan Tidak Tetap*-Temporary Assignment) doctors or by the private sector such as those hired by mining industries), religious organization workers, etc. The number of medical practitioners that are permanent residents of Papua and West Papua do not make the whole number reported and a portion of the numbers reported might well be temporarily assigned personnel which at some point may leave the region and therefore reduce the overall quantity of medical professionals available to provide health care in Papua. Incentives, monetary or otherwise, should be provided for doctors and other medical professionals who choose to practice in Papua and West Papua. Providing a conducive political environment, adequate housing, providing quality education opportunities for both medical professionals and also their families, and ensuring economic stability can also contribute to the increase of doctors, registered nurses and midwives in Papua and West Papua.

Another concern is that statistics alone do not represent the quality of health care providers in the provinces of Papua and West Papua. A question arises whether medical practitioners in Papua and West Papua have the same qualifications as those practicing in Java or Sumatera. Training in health related issues and opportunity to further education outside of Papua and West Papua should be constantly given in order to ensure that medical practitioners are up to date with the latest progress and innovations in health care and also able to implement them in daily practice.

Other policies made in Papua and West Papua following the implementation of the Special Autonomy Law of 2001 concern health programs. Health programs are mostly focused on management of tuberculosis, HIV/AIDS and malnutrition, preventing communicable diseases and promoting reproductive and maternal health care, as well as promoting pediatric health. The effectivity of these programs can be seen through several health indicators such as child mortality ratio, maternal mortality ratio, vaccination coverage, etc. Through these indicators, we can evaluate how the implementation of the Special Autonomy Law of 2001 which provides more funding for health care and wider room for implementing local policies affect the reality of health related issues in the community in the provinces of Papua and West Papua.

Several infectious diseases which cause plenty of concern are HIV/AIDS infection, tuberculosis, and measles. Papua has the second most cases of newly detected AIDS patients in Indonesia as of 2011 with the cumulative case numbers rapidly increasing from 388 in

2003 to 4,449 in 2011. Indonesia in 2010 has an estimated HIV prevalence of 0.27% among the 15-49 years age group.<sup>23</sup> Indonesia's HIV and AIDS epidemic is concentrated amongst key affected population resulting from a mix of two modes of transmission, sexual transmission and drug injecting.<sup>24</sup> While most provinces face a concentrated epidemic amongst key affected populations, by 2006 evidence showed that across the two provinces of Papua and West Papua a low-level general population epidemic was underway, with HIV prevalence of 2.4% among the general population. It is fueled almost completely by unsafe sexual intercourse.<sup>25</sup>

Providing information on HIV/AIDS infection and its transmission to the general population is essential while promotion of safe sexual behavior such as abstinence, being faithful to a sexual partner and condom usage as well as controlling prostitution is expected to be able to reduce the widespread of HIV/AIDS infection. High risk populations (male and female sex workers and transgenders) should also be empowered in the fight against HIV/AIDS by promoting the use of condoms during unsafe sexual intercourse and making condoms easily available to the high risk populations. HIV testing, early detection, early ARV (Anti-Retroviral) therapy may also play a part in reducing the prevalence of HIV/AIDS infection in Papua.

Case detection rate in 2012 in Papua and West Papua both fall under the national case detection rate which was 42.32%. Tuberculosis detection rate is the percentage of newly notified tuberculosis cases (including relapses) to estimated incident cases.<sup>26</sup> As of June 2012, the tuberculosis detection rate in Papua was 24.79% while in West Papua the number was 16.92%. Another indicator is the tuberculosis success rate which is the percentage of new, registered smear-positive (infectious) cases that were cured or in which full course of treatment was completed.<sup>27</sup> In 2012, the Indonesian national tuberculosis success rate was 90.8%, above the Ministry of Health of the Republic of Indonesia's Renstra (*Rencana Strategis*- Strategic Plan) target of 87%. In the same year, the tuberculosis success rate in Papua was 78.4% and in West Papua 71%, the lowest in Indonesia.

Tuberculosis detection rate is an important indicator of the prevention and management of tuberculosis. Detection rate of tuberculosis represents the number of actual patients reported compared to the number of projected patients. The higher the detection rate means that the number of undiagnosed patients become smaller and therefore there are more patients receiving therapy and less unknown patients who become infectious in the community which in turn may give an illustration of the spread of tuberculosis in the general population. Low case detection rates in both Papua and also West Papua which are under the national case detection rate present a dire situation in the fight against tuberculosis. With case

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<sup>23</sup> Government of Indonesia. Ministry of Health. *Mathematic Model of HIV Epidemic in Indonesia, 2008-2014*.

<sup>24</sup> Indonesian National AIDS Commission, Republic of Indonesia Country Report on the Follow-up to the Declaration of Commitment on HIV/AIDS. 2012.

<sup>25</sup> Government of Indonesia, Ministry of Health. *IBBS Tanah Papua*. 2006.

<sup>26</sup> World Health Organization. *Global Tuberculosis Control Report*

<sup>27</sup> *Ibid*

detection rate levels at low levels, undiagnosed and untreated patients are numerous and therefore present a threat to the community.

On the other hand, tuberculosis success rate is an indicator of successfully treated tuberculosis patients which in turn may reduce the rate of tuberculosis infection among the population. Both in Papua and also West Papua, the success rates were below the national success rate and also the target rate. Tuberculosis treatment using DOTS (Directly Observed Therapy-Short Course) method requires the patient to take medication for at least 6 months. The low success rate can be caused by the inability of patients to complete therapy due to an array of reasons such as unwillingness to continue medication after the first 2 months, adverse effects of anti-tuberculosis medication and also limited access to medication. In Papua and West Papua, apart from reasons arising from the patient, availability of drugs and also access to health providers and public health centers may be limited.

Improving both tuberculosis detection rate and also tuberculosis success rate in Papua and West Papua face challenges to improve the distribution of anti-tuberculosis drugs, providing adequate access to drugs by building infrastructure and optimizing the function of mobile public health centers (*Pusling*), adequate monitoring of tuberculosis medication in public health centers, providing counseling on tuberculosis for the general public and improving the detection and reporting of tuberculosis cases.

Papua's incidence rate of measles infection in 2011 was 2.88 per 100.000 population while West Papua's incidence rate was 1.84 per 100.000 population. The national incidence rate was 9.22 per 100.000 population. While it may show a positive outlook into the occurrence of measles in the community, false reporting or unreported cases may also contribute to the statistical data. No recent statistic information of dengue infection morbidity for both Papua and West Papua also signifies the need for improvement of accurate reporting.

There is no clear picture on maternal death in the Papua and West Papua provinces. However, the World Health Organization, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), The World Bank and United Nations Population Division (UNPD) through the Maternal Mortality Estimation Inter-Agency Group (MMEIG) found that maternal mortality ratio (MMR) in Indonesia decreased from 600 per 100,000 live births in 1990, 420 per 100,000 live births in 1995, 340 per 100,000 in 2000, 270 per 100,000 live births in 2005 to 220 per 100,000 live births in 2010.<sup>28</sup> This number does not represent the condition in all of Indonesia. In eastern Indonesia, especially Papua where the highland terrain is a natural barrier, quality of health care differs between districts, and access to health care is limited, the ratio is projected to be two or three times the national maternal mortality ratio.<sup>29</sup>

The lack of information on maternal death in Papua reflects the poor groundwork on which a strategic plan to reduce maternal mortality ratio in keeping with the Millennium Development Goals 2015 (MDGs 2015) needs to be built. Some deaths occurring in the most

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<sup>28</sup> *Trends in Maternal Mortality 1990-2010: WHO, UNICEF, UNFPA and The World Bank Estimates*, May 2012.

<sup>29</sup> IRIN, Indonesia. 2012. *Maternal Mortality Ratio Stagnates*.



rural areas may not be reported due to limited or non-existing access to medical care or government officials. Lack of information also prevents health care providers and the government from acknowledging the leading causes of maternal death in Papua and in turn presents difficulty in preventing maternal death.

Promoting usage of birth control to reduce number of pregnancies and widen the gap between pregnancies as well as promoting ante natal visits during pregnancy are intended to help fertile women experience safe pregnancies. Assisted labor by medical professional helps to ensure safe delivery and early referral. These measures in turn intend to reduce maternal mortality.

Papua and West Papua scored under the national percentage of active birth control users of 75.96% in 2011. Papua had the lowest percentage of active birth control users that year with only 49.08 % while West Papua was close to the national percentage with 75.44%. K4 or ante natal care visits are visits done by expecting mothers to health care providers to monitor their pregnancy, once during the first trimester, once during the second trimester and twice during the last trimester. Ante natal care visits (K4) in Papua and West Papua were the lowest two in the nation (50.03% and 50.72% respectively) in 2011. That year, the national percentage was 88.27%, above the target intended in the Renstra (*Rencana Strategis-Strategic Plan*) of the Ministry of Health which was 88%. Percentage of labor assisted by health professionals were also significantly low Papua and West Papua in 2011 (53.42% and 61.41% respectively). The national percentage was 86.38% while the target intended in the 2011 Renstra (*Rencana Strategis-Strategic Plan*) was 86%.

There is room for improvement in maternal health care in both Papua and also West Papua. Low participation in birth control usage depicts not only rapid increase of population but also a threat to maternal health. Ensuring availability of birth control tools and reproductive health care as well as providing proper counseling on reproductive health are needed in order to increase participation of couples in using birth control tools or methods. Availability of birth control pills, hormonal injections and condoms might not be easily guaranteed as Papua and West Papua most likely rely on shipment from outside of the provinces. Difficulty in distributing these birth control tools to the most rural areas may also prevent acceptors from routinely practicing birth control. More permanent options such as IUDs (Intra Uterine Device) require skills of health care providers, namely medical doctors or midwives in inserting and displacing them. In areas where access to public health centers and health care providers are limited or non-existing, IUDs seem to be an unlikely choice of birth control. Birth control methods such as Billing's ovulation method (avoiding sexual intercourse during ovulation period) and *coitus interruptus* require constant counseling and where many health cadres are needed to educate the community. With limited human resources available and the unreliable practice of such methods where there is a low rate of success in preventing pregnancy, birth control methods are also not the ideal form of birth control in Papua and West Papua. Overall, availability of health care and health care providers are the key to ensuring birth control participation. Without easy access to public health centers and health care providers, it is likely that birth control participation in Papua and West Papua will remain low.

Routine ante natal care visits are intended to detect problems in pregnancy as early as possible and determine whether a pregnancy is high risk or not. High risk pregnancies need to be referred to an obstetrician and delivery should be done in a hospital. Early detection of high risk pregnancies not only helps to ensure early referral of pregnant mothers with this condition which may prevent maternal death but also prepare the mother and her family regarding funds needed for hospitalization and treatment by an obstetrician, transportation to the nearest hospital and also other related issues such as preparing blood donors. Low participation in ante natal care visits (K4), under both the national percentage and also the Ministry of Health's target indicate what may contribute to maternal death in Papua and West Papua. Undetected pathological conditions during pregnancy, possible complications of pregnancy and late referral due to a variety of reasons are all possible causes of the estimated high maternal mortality ratio in Papua and West Papua. Availability of access to health care providers and public health centers are needed to aid pregnant women and their families to easily receive health care. It is difficult to imagine that a pregnant woman would come for an ante natal care visit if the nearest public health center might be far from where she lives. Lack of transportation and infrastructure to connect districts in Papua and West Papua also contribute to the low participation in ante natal care visits completion (K4).

Labor assisted by medical professionals are expected to ensure safe delivery, safeguarding the life of both the mother and also the child. Maternal complications during and after delivery still account as leading causes of maternal death. Post-partum bleeding and infection contribute to maternal death. Inadequate management of labor and unsterile conditions pose threats to the life of the mother and while assisted labor by health professionals does not guarantee 100% the safety of the mother, it does however take measures to prevent and manage conditions which may arise during and after pregnancy. Limited access to health care providers and public health centers and/or hospitals prevent pregnant mothers to seek assistance of medical professionals when giving birth. A possible solution to this is training non-medical personnel to be skilled birth attendants.

The Indonesian Demography and Health Survey (*Survei Demografi dan Kesehatan Indonesia*) in 2012 found there were 74 infant deaths per 1,000 live births in West Papua while the number was 54 per 1,000 live births in Papua. MDGs (Millennium Development Goals) 2015 points out that the target is  $\leq 23$  per 1,000 live births). Although the numbers reflect conditions 10 years before the survey was held, this is the most recent information available. Death in children under the age of 5 in Papua and West Papua was 115 and 109 per 1,000 live births (MDGs 2015 target is  $\leq 32$  per 1,000 live births).

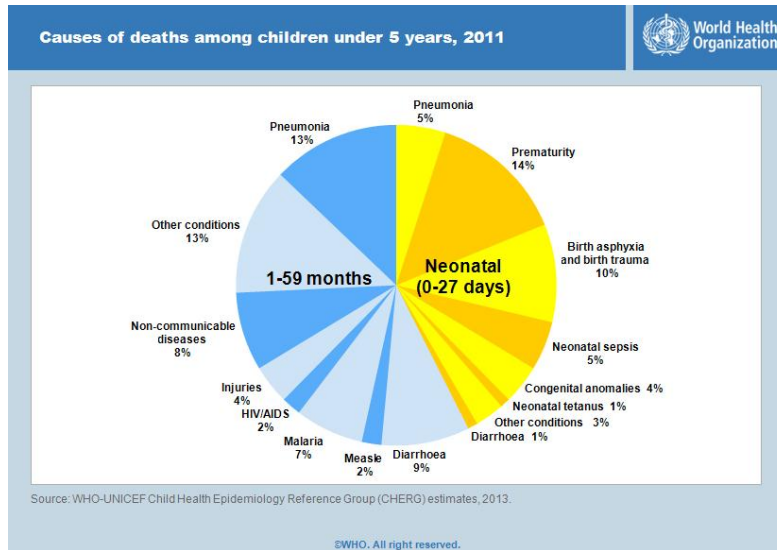
A child's risk of dying is highest in the neonatal period, the first 28 days of life. Safe childbirth and effective neonatal care are essential to prevent these deaths. 43% of child deaths under the age of five take place during the neonatal period.<sup>30</sup> Distribution of causes of death among infants and children under 5 years of age are shown in Chart-19 below. Prematurity (14%) is the leading cause of death during the neonatal period with birth asphyxia and birth trauma following closely behind (10%) while from the end of the neonatal period and through the first five years of life; the main causes of death are pneumonia (13%),

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<sup>30</sup> World Health Organization. 2012. *Children: Reducing Mortality*.

diarrhea and malaria. Malnutrition is the underlying contributing factor in over one third of all child deaths, making children more vulnerable to severe diseases.<sup>31</sup>

**Chart-4. Causes of Deaths among Children Under Five Years in 2011**



The majority of child deaths due to infectious diseases can be prevented by known, simple, affordable and low cost interventions such as exclusive breastfeeding up to 6 months of age, immunization, appropriate use of antibiotics, oral rehydration therapy and zinc, insecticide treated bed nets, and anti-malarias. The risk of dying during this period can be reduced with quality care during pregnancy, safe and clean delivery by a skilled attendant, and immediate postnatal care, including neonatal resuscitation, extra care of low birth weight babies, attention to baby warmth, treatment of neonatal sepsis and early initiation of breastfeeding.<sup>32</sup>

**Table-5. Leading Causes of Death in Post-neonatal Children: Risk Factors and Response**

Cause of death	Risk factors	Prevention	Treatment
Pneumonia, or other acute respiratory infections	Low birth weight	Vaccination Adequate nutrition Exclusive breastfeeding	Appropriate care by a trained health provider Antibiotics Oxygen for severe illness
	Malnutrition		
	Non-breastfed children		
	Overcrowded conditions		

<sup>31</sup> *Ibid*

<sup>32</sup> World Health Organization. *Global Health Observatory, Causes of Child Mortality by region 2000-2011*.

Cause of death	Risk factors	Prevention	Treatment
Childhood diarrhea		Exclusive breastfeeding	Low-osmolarity oral rehydration salts (ORS)  Zinc supplements
	Non-breastfed children	Safe water and food	
	Unsafe drinking water and food	Adequate sanitation and hygiene	
	Poor hygiene practices	Adequate nutrition	
	Malnutrition	Vaccination	

In order to prevent child deaths under 5 years of age including during the neonatal period in Indonesia in general and specifically in Papua and West Papua, monitoring the neonatal period, vaccinations against communicable diseases and vitamin A supplementation are done to ensure the wellbeing of children under 5.

Complete neonatal visits (*Kunjungan Neonatus Lengkap*) percentage in 2011 in Indonesia was 84.18% while in Papua it was 18.86% and in West Papua the number was 32.64%, the two lowest in the country. Low percentage of complete neonatal visits may be caused by several reasons. Unassisted labor at home or elsewhere outside of medical facilities prevents infants from receiving early health care and monitoring. Limited access to health care facilities also discourages parents to bring their infants to health care providers. Should prematurity, complications of delivery or congenital diseases be found, without proper care and intervention, the infant would most likely die. Education and counseling on how to care for infants and exclusive breastfeeding up to 6 months are also given during neonatal visits. When neonatal visits are not completed, parents and caregivers are prevented from receiving information on simple ways to ensure the health of a newborn.

Vaccination is a measure taken to prevent infectious diseases. In 2011, the national coverage of recipients of measles vaccination was 93.65% of the population, above the target set by the World Health Organization (WHO) which is 90%. However, in the same year, the percentage was 69.9% in Papua and 87.21% in West Papua.

Low coverage of measles vaccination depicts the high possibility for children, especially under 5 years, to contract measles. Coverage of measles vaccination in both Papua and also West Papua which are under the national coverage and the target set by WHO show how measles and its complications may contribute to the high child mortality ratio. Complications of measles infection such as pneumonia and severe diarrhea can often result in death.

In 2011, Vitamin A supplementation in children under 5 years of age in Papua (23.79%) and West Papua (32.79%) were also far from the national mean of 82.66%.

Without sufficient vitamin A supplementation, susceptible children may suffer severe complications from communicable diseases such as measles and diarrhea which in turn may cause death. Poor coverage of vitamin A supplementation in Papua and West Papua also contributes to high child mortality ratio in the region.

Improving both vaccination against measles coverage and also vitamin A supplementation coverage should be a priority in improving the wellbeing of children under 5 years. Ensuring the supply of vaccines and vitamin A capsules and its distribution to even the most remote areas should help efforts to reduce child mortality. Access to health care is still a problem. With limited health care facilities and rare health care providers, setting out vaccination and supplementation campaigns as well as monitoring health of children become difficult. Community-based clinics such as *Posyandu* which is managed by trained community members (not medical professionals) may be able to aid in providing health care in rural areas and also as an early warning system for child health problems. Although *Posyandu* is a community based effort, government will is important to ensure its existence and work. Local government funding, providing health care providers to train community members and offer counseling, providing necessary tools and supply and ease referral to health care facilities are also the responsibility of the government as well as the community.

Malnutrition is an underlying cause of many of communicable diseases especially in children. Papua suffers from an irony of having fertile and mineral rich land but is the most impoverished province in Indonesia. In 1999, 54.75% of its population is poverty stricken (Djojosoekarto et al, 2008). Absence or lack of infrastructure and transportation also accounts for difficulty to provide alternative food sources from outside of Papua and West Papua. In order to manage malnutrition effectively, guaranteeing supply of food and education on healthy eating habits are also necessary to be looked into.

## CONCLUSION

The implementation of health policies under the Special Autonomy Law of 2001 does not translate into satisfying results using known health indicators. Despite the increasing funds allocated for the health sector and the implementation of local policies concentrating on construction of health facilities and infrastructure, promoting health programs, and optimizing human resources in the health sector, Papua and West Papua are still far from reaching standards in health care that are in keeping with the Ministry of Health's *Renstra (Rencana Strategis-Strategic Plan)* and in turn is intended to achieve the Millennium Development Goals (MDGs) 2015.

The challenges in health care in Papua and West Papua are (1) lack of health care facilities such as public health centers (*Puskesmas*), hospitals and *Pusling*, (2) lack of health care providers, (3) high prevalence of HIV/AIDS infection, (4) low detection rate and success rate of tuberculosis, (5) high maternal mortality ratio, (6) high infant and children under 5 years mortality ratio, (7) low participation of birth control users, (8) low participation in ante natal care visits, (9) low coverage of labor assisted by medical professionals or skilled assistants, (10) low coverage of complete neonatal visits, (11) low coverage of vaccination against measles, and (12) low coverage of vitamin A supplementation.

To counter these challenges, several measures must be taken such as (1) improving quality and quantity of health facilities such as public health centers (*Puskemas*), hospitals and *Pusling*, (2) improving quality and quantity of doctors and health care providers, (3) improving HIV/AIDS counseling and promotion of safe sexual behavior to reduce the prevalence of HIV/AIDS infection, (4) improving counseling on tuberculosis to increase tuberculosis detection rate and success rate and reduce the spread of tuberculosis, (5) increasing birth control users, (6) increasing participation in ante natal care visits, (7) training medical and non-medical human resources to become skilled birth attendants, (8) optimizing *Posyandu*, (9) ensuring the supply of health related items, tools and drugs (birth control tools, vaccines, vitamin A capsules, etc.), (10) improving data and information gathering and reporting, (11) improving general infrastructure and transportation and (12) ensuring funding in the health sector from the government, private sectors, non-governmental organizations, religious organizations, international aids and other possible sources.

This paper intends to highlight the policies made in the health sector after the implementation of the Special Autonomy Law of 2001 and how it relates to health conditions of the population of Papua and West Papua. Statistics and other information gathered barely touch the surface of the reality of health care in the field. Follow-up studies should be made to be able to obtain valid information that can be made as groundwork for the development of Papua and West Papua in the health sector.

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