

# Implementation of Program for the Prevention of Mother-to-Child Transmission of HIV in South Jakarta

## Pelaksanaan Program Pencegahan Penularan HIV dari Ibu ke Anak di Jakarta Selatan

---

Fase Badriah\*, Minsarnawati Tahangnacca\*, Raihana Alkaff\*\*, Takeru Abe\*\*\*, Laily Hanifah\*

---

\*Faculty of Health Sciences, Syarif Hidayatullah State Islamic University Jakarta, South Tangerang, Indonesia, \*\*Graduate School of Medicine, Tohoku University, Sendai, Japan, \*\*\*Faculty of Health Advanced Critical Care and Emergency Center, Yokohama, Japan

### Abstract

Even though the Prevention of Mother to Child Transmission (PMTCT) program has been running in Indonesia since 2006, the proportion of human immunodeficiency virus (HIV)-infected pregnant women remains high in several districts in Indonesia. The aim of this study was to observe the overall four-pronged strategy of PMTCT programs in South Jakarta. The study was a qualitative study on PMTCT program implementation in South Jakarta, Indonesia, whereas the proportion of children with HIV positive in the area was quite high. The analysis used domain analysis by looking the implementation of PMTCT as a system consisting of input, process and output. PMTCT strategy is based on a comprehensive four-pronged strategy. This study found that scaling-up communication and education about PMTCT program from health provider to community was needed. In the first prong, there was no specific health provider for PMTCT program, it was still integrated with the Medical Center Health staff. In the second prong, implementation of HIV testing and counseling for couples of women living with HIV remained a bottleneck because women living with HIV felt fear to inform their HIV status to their partners. Thus, counseling and HIV testing for couples have not benefited at all. This study found the low coverage and less responsiveness of PMTCT program to build a network of partners with various elements of government.

**Keywords:** HIV, prevention of mother to child transmission program, prong program, system analysis

### Abstrak

Meskipun program Pencegahan Penularan Ibu ke Anak (PPIA) telah berjalan di Indonesia sejak 2006, proporsi wanita hamil yang terinfeksi virus (HIV) tetap tinggi di beberapa kabupaten di Indonesia. Tujuan penelitian ini adalah mengobservasi seluruh empat prong strategi PPIA program di Jakarta Selatan. Penelitian ini merupakan studi kualitatif tentang pelaksanaan program PPIA di Jakarta Selatan, Indonesia, yang memiliki proporsi anak dengan HIV positif di daerah itu cukup tinggi. Analisis menggunakan analisis domain untuk mengobservasi implementasi sistem PPIA yang terdiri dari input, proses, dan output. Strategi PPIA didasarkan pada strategi empat cabang yang komprehensif. Studi ini menemukan bahwa perlunya peningkatan komunikasi dan pendidikan tentang program PPIA dari penyedia layanan kesehatan kepada masyarakat. Berdasarkan Prong pertama ditemukan tidak adanya penyedia layanan kesehatan khusus untuk program PPIA, masih terintegrasi dengan staf Kesehatan Ibu dan Anak di puskesmas. Pada Prong kedua, implementasi tes dan konseling HIV untuk pasangan perempuan yang hidup dengan HIV tetap menjadi penghambat karena perempuan yang hidup dengan HIV merasa takut untuk menginformasikan status HIV mereka kepada pasangan mereka. Studi ini menemukan cakupan yang rendah dan kurang responsif program PPIA untuk membangun jaringan mitra dengan berbagai elemen pemerintah.

**Kata kunci:** HIV, program pencegahan transmisi HIV ibu ke anak, prong program, analisis sistem

**How to Cite:** Badriah F, Tahangnacca M, Alkaff R, Abe T, Hanifah L. Implementation of program for the prevention of mother-to-child transmission of HIV in South Jakarta. *Kesmas: National Public Health Journal*. 2018; 12(4): 159-164 (doi:10.21109/kesmas. v12i4.1707)

---

**Correspondence:** Fase Badriah, Faculty of Health Sciences, Syarif Hidayatullah State Islamic University Jakarta, Kertamukti Pisangan Street, Ciputat, South Tangerang 15419, Phone: +6221-747167718, E-mail: fase\_bzm@uinjkt.ac.id  
Received: August 30<sup>th</sup> 2017  
Revised: December 18<sup>th</sup> 2017  
Accepted: January 05<sup>th</sup> 2018

## Introduction

Previous study reported that mother-to-child transmission of HIV can be reduced from 15–40% to 1% through effective Programs for Prevention of Mother-to-Child Transmission (PMTCT).<sup>1-4</sup> Currently, in Indonesia, the number of HIV/AIDS-infected patients increases rapidly. It is projected that the number of women who need PMTCT support and services increases from 5,730 in 2010 to 8,170 in 2014.<sup>5</sup>

Ministry of Health of the Republic of Indonesia reported the increasing cumulative cases of children living with HIV from 1,158 in 2012 to 1,194 in 2013.<sup>6</sup> The National AIDS Strategy 2010-2014 explained that the transmission of HIV from mother to child tends to increase along with the increasing number of positively HIV-infected women either from their spouse, or as a result of risky behavior. Based on the projection, the number of pregnant women who require PMTCT services would increase from 5,730 people in 2010 to 8,170 people in 2014.<sup>7</sup>

The increase in cases of pregnant women with HIV positive is quite high, which occurred in some regions, particularly in South Jakarta. In 2010-2013, there were 63 cases of 149 cases of HIV positive that were pregnant mothers.<sup>6</sup> Incidence rate of loss of follow-up was 5.15 per 100 person years.<sup>6</sup> The proportion of HIV-infected infant remains high, even though PMTCT program has been running since 2006. Hence it requires an evaluation of the PMTCT program implementation in this municipality. Based on the data, the aim of this study was to analyse the overall four-pronged strategy of PMTCT programs in South Jakarta.

## Method

This study was a qualitative study by using in-depth interviews. Data were collected in 2015. The methods used in this study included literature review and key informant interviews. The informant in this study was a staff of infectious diseases unit at the district health office, three heads of primary health care, three staffs maternal and child health care from three primary health care, three cadres of community-based integrated health care, two health staff from one non-governmental organization (NGO) and eight HIV positive-infected women with PMTCT records and six couples (women and men) with HIV negative and living in the area of primary health care.

The analysis used domain analysis by looking the implementation of PMTCT as a system consisting of input, process and output.<sup>8</sup> PMTCT strategy is based on a comprehensive four-pronged strategy.<sup>9-11</sup> The strategy aimed at integrating key interventions into essential maternal, newborn and child health services. The first prong emphasizes on the importance of preventing HIV among

women of childbearing age before they become sexually active or get pregnant. The second prong focuses on the prevention of unintended pregnancies among women living with HIV by voluntary counseling and testing (VCT) and contraceptive services. The third prong focuses on pregnant women who are already infected, which includes comprehensive maternal and child care, VCT, Antiretroviral treatment, HIV and baby feeding counseling as well as safe delivery. Since breastfeeding is prohibited, the milk given to the baby should fulfill WHO standard known as AFASS that is Acceptable, Feasible, Affordable, Sustainable, and Safe. The fourth prong calls for better integration of HIV care, treatment, psychological and social support for HIV positive-infected women and their families.<sup>11</sup> There were two stages of analysis in this study. The first was system analysis based on input-process and output, then analysis on the four-pronged strategy of PMTCT program.

## Results

The result of this study found that the target of PMTCT program was limited to patients who attended Continuing Healthcare, and failed to outreach a wider target, who was not primary health care visitor. Meanwhile, target of one prong of PMTCT program is a community. One informant said that she had never heard of PMTCT program or VCT from primary health care.

*“We never obtain information related to HIV or other programs from the primary health care.”* (a 38 year-old mother).

There was no specific staff for PMTCT program due to the limitations of human resources with health education background at primary health care, as well as PMTCT program integrated with maternal and child health programs at primary health care. There were primary health care staff confirmed that the primary health care had the limited number of staff. The primary health care staff then have abundant tasks, along with the increasing number of patients in recent years. They were still prioritizing curative services for the increasing number of patients.

*“Indeed we do not have officer anymore, because of a limited number of officers and PMTCT program is integrated with MCH program.”* (A staff for Mother and Child Care Program at primary health care).

In addition, the district health office staff informed that the PMTCT program is still the focus for specific population and not prioritized at primary health care, such as other patients of health centers, pregnant women or mothers who came when their children immunized. To target outside the primary health care and the public, the government has been working with NGOs. Programs run by NGOs were capable to reach the population in a wider community. They also considered as fairly limited

Table 1. The Results of Prong Program and System Analysis of Prevention of Mother-to-Child Transmission Program Approach

Program	Target Four-pronged Program	Input	Process	Output
Community	First prong	No specific health staff for PMTCT program in primary health care, it was still integrated with the MCH staff of primary health care	The dissemination of information and education on PMTCT program had not been carried out to the community	Low coverage and under utilized program
HIV positive	Second prong	No specific health staff for PMTCT program or primary health care staff who have skill to communicate educate about HIV	<ul style="list-style-type: none"> <li>- Communication-education about HIV/AIDS program and safe sex effort had been running with the counseling by text or communication by phone, but the information provided was limited to what was being asked by the service recipients.</li> <li>- Implementation of HIV testing and counseling for couples of women with the HIV remains a bottleneck; due to women living with HIV felt fear to inform their HIV status to their partners.</li> <li>- Implementation of integrated ANC services including offers of HIV testing had been done at all primary health care and reported to DHO.</li> </ul>	<p>Less responsiveness</p> <p>Less coordination among stakeholders</p>
HIV positive	Third prong	The number of PMTCT staff and the budget for HIV testing were limited	<ul style="list-style-type: none"> <li>- There were some pregnant women who had not received HIV testing and counseling services because they did not visit the primary health care.</li> <li>- HIV testing and counseling services had been done at the primary health care, however, it was still limited to the visitors of primary health care. Almost all programs had been implemented.</li> <li>- Most of pregnant women who were already infected demanded that HIV testing to be integrated into maternal and child care, that they would receive ARVs to prevent transmission and that they would get counseled adequately on the best feeding option for their babies.</li> </ul>	HIV positive-infected women lost of follow-up
HIV positive		Specific health staff or cadres had communication skill for empathy on HIV	<ul style="list-style-type: none"> <li>- There was perception of HIV positive-infected mother who stated that the primary health care was not the right place to carry out PMTCT services. This was due to her HIV status known by the local community.</li> <li>- Several HIV positive-infected mothers went to the primary health care to check up their health status, and midwives that served them were different for each visit.</li> <li>- HIV positive-infected women did not feel comfortable with the PMTCT program at the primary health care.</li> <li>- There was a challenge to establish primary health care to become comfortable for mothers living with HIV</li> </ul>	<p>Less responsiveness</p> <p>There were reports of loss to follow up related the incidence of HIV positive-infected mothers.</p>

Notes:

PMTCT = Prevention of Mother-to-Child Transmission , MCH = Medical Center Health

budget for PMTCT.

*“PMTCT funding is simply too small, MCH problem is still our concern, the government should rethink about it, because, as we know, there is the increasing number of mother living with HIV”* (district health office staff)

For second prong, primary health care provided counseling by text or phone for communication, but had not been able to reach many targets. Generally, when a person has been diagnosed as HIV positive, he/she would feel ashamed or reluctant to go to the clinic. They explained that they did not dare to ask many things because of fear. Even one woman found that primary health care

was not a suitable place for them to consult.

*“It was uncomfortable, because the primary health care is not a suitable place, I am afraid to be rejected because they have already known my HIV status”* (a 32 year-old pregnant women living with HIV).

It was also presented by other patients that HIV positive-infected mothers did not feel comfortable to do the Antenatal Care, either with the other patients or their primary health care officer.

*“If we get pregnant and HIV positive, we do not feel good, we are uncomfortable to be examined at the primary health care. It is more convenient for us to be visit-*

*ed by a cadre, as long as she really wants to help.* “ (A 32 year-old mother living with HIV positive).

Some informants stated that they did not even come to the clinic because of shame and afraid, hence the HIV patients possibly lost follow-up. They were difficult to accept that they had HIV positive status and they did not want people to know their status as they got fear of a different treatment compared to those people who were not living with HIV, and the fear was greater among pregnant women with HIV positive. The overall results of the investigation on the implementation of the four prongs of this program are described in Table 1.

## Discussion

This study found that scale up of communication and education about PMTCT program from health staff to community is needed. The staff only concerned to inform PMTCT to patients who came to primary health care as patients of maternal and children care. This PMTCT arrangement needs more client-oriented system in Indonesia, like the one in the routine provider-initiated approach in Vietnam.<sup>12</sup> In the fourth prong, the need for better integration of HIV care, treatment and support for women and their families was found to be positive. There were reports of loss to follow up related incidence of HIV positive-infected mothers.

Currently, the lack of coordination and collaboration among program components, the integration of HIV pediatric and maternal care into sexual and reproductive health and maternal, newborn and child health (MNCH) services are major source of concern. As found in another study, even the DHO staff in other cities in Indonesia, such as Medan and Bandung, also stated that the PMTCT implementation was not optimally performed, the health sector was only responsible to implement the third and the fourth prongs, while the first and second prongs were implemented by NGOs in the community.<sup>6,7</sup> They also admitted that they never sit together with other stakeholders to discuss it. Even in Ministry of Health, there was a special working group for PMTCT, but it did not include the representatives from civil society, especially organizations of HIV positive-infected women. The low access and uptake of ANC services, a large proportion of women who delivered at home made it very challenging for many pregnant women to access facility-based PMTCT services, while it seems to happen in many developing countries.<sup>13,14</sup> In addition, since the majority of women in ANC settings are HIV negative, the health promotion that includes HIV prevention is not considered as priority. Opportunities of keeping these women HIV free are often missed, and sero-conversion during pregnancy has been noted.<sup>13-17</sup>

Although almost all programs had been implemented, most of the infected pregnant women demanded that

HIV testing would be integrated into ANC, that they received ARVs to prevent transmission of the virus and that they got counselled adequately on the best feeding option for their babies. However, some pregnant women did not have HIV tested because they did not visit primary health care.

There were perceptions of HIV positive-infected mothers who stated that the primary health care was not the right place to carry out PMTCT services due to the staff turnover. Findings by another study also showed that a medical doctor even regretted the pregnancy of the HIV positive-infected women.<sup>7</sup> Therefore, it needs a better integration of HIV care, treatment and support for HIV positive-infected women and their families.

Problems that occur in the second to the fourth prong caused the same outcome, in which there were less responsiveness and a fear of the HIV patients to use PMTCT services at health centers. The continuous community education to people living with HIV should be taken seriously with comprehensive information. A phenomenon of the number of pregnant mothers living with HIV that lose follow-up should be concerned due to the high number of mothers who prefer to deliver at home assisted by the traditional birth attendants in Indonesia.<sup>18</sup> It will harm themselves and the birth attendants, too.

The condition was relatively similar to previous studies that in Indonesia, the PMTCT program was not integrated with ANC at primary health care due to the high loss of follow-up and they did not feel comfortable getting service at the primary health care, so that the role of cadres or voluntary officers to motivate mothers living with HIV was substantial.<sup>12,19</sup> This situation was worsened if the mother gave birth when she was HIV positive infected, that also put health workers at risk to be infected too if they did not practice universal precaution. Postnatal transmission through breastfeeding also remains a significant concern and is often a result of confusing infant feeding messages and good infant nutrition as well as low postnatal ARV coverage for both mothers and infants.

The number of HIV among infants and children could identify HIV-infected women who needed special attention. By the strengthening of linkages among these and other programmes concerned on care and support for HIV positive-infected women, their infants and families can ensure that the women gain access to the services they need. Such services may involve the prevention and treatment of opportunistic infections, ARV treatment, psychosocial and nutritional supports, along with reproductive health care, including safer delivery, family planning, counseling and support for infant feeding. Improvements in the survival and quality of life of mothers can be expected to be accompanied by important benefits. Access to care and support should also enhance

community support for programs aimed at preventing mother-to-child-transmission.

Community empowerment in PMTCT and other health services have been done by the primary health care and NGOs, although the number of NGOs involved in HIV programs is limited. Health workers, traditional leaders, and religious groups were also involved in the program. Nevertheless, socialization for HIV prevention programs, especially PMTCT, needs improvement.

### Conclusion

PMTCT program has not been optimally implemented. It is important to support the scale-up access to PMTCT for all women since the PMTCT program still concerns on informing PMTCT to persons that visited CHC only. The increasing number of HIV-infected mothers who lost follow-up indicates that it needs a better integration of HIV care, treatment and support for HIV positive-infected women and their families.

The study finds that PMTCT program is not integrated with ANC at primary health care due to the high loss of follow-up among the HIV-infected mothers, and they do not feel comfortable getting services at the primary health care, so that the role of cadres or voluntary officers of NGO staff to motivate mothers living with HIV is substantial.

### Recommendation

To support PMTCT Program, primary health care should make a partnership with NGOs. It is important to support the scale-up access to PMTCT for all women that have a risk, since the PMTCT program still covers persons who visit primary health care only.

In the collection of real data to measure the outcome and impact of PMTCT program, inevitably some information are missing and some subjects lost follow-up. Therefore, an effort to assess outcomes in the population is not captured, in order to derive a more nationally representative measurement. There is also a need of health resources in the health promotion of PMTCT by training and community mobilization through cadres to play a role as an agent in public health information. It also needs to build a network of partners with various elements of government and organizations concerned on the impact of mother-to-child transmission of HIV.

### References

1. Mazia G, Narayanan I, Warren C, Mahdi M, Chibuye P, Walligo A, Mabuza P, Shongwe R, Hainsworth M. Integrating quality postnatal care into PMTCT in Swaziland. *Global Public Health*. 2009 [accessed 17 Juni 2016]; 4(3): 253-70. Available from: <http://dx.doi.org/10.1080/17441690902769669>.
2. Nkonki LL, Doherty TM, Hill Z, Chopra M, Schaay N, Kendall C. Missed opportunities for participation in prevention of mother to child transmission programmes: Simplicity of nevirapine does not necessarily lead to optimal uptake, a qualitative study. *AIDS Research and Therapy*. 2007 [accessed 20 Juni 2016]; 4:27. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2211501/>.
3. Townsend CL1, Cortina-Borja M, Peckham CS, de Ruiter A, Lyall H, Tookey PA. Low rates of mother-to-child transmission of HIV following effective pregnancy interventions in the United Kingdom and Ireland, 2000–2006. *AIDS*. 2008 [accessed 17 Juni 2016]; 22(8): 973-81. Available from: [http://journals.lww.com/aidsonline/Fulltext/2008/05110/Low\\_rates\\_of\\_mother\\_to\\_child\\_transmission\\_of\\_HIV.8.aspx](http://journals.lww.com/aidsonline/Fulltext/2008/05110/Low_rates_of_mother_to_child_transmission_of_HIV.8.aspx).
4. United Nations Programme on HIV/AIDS. Global report: UNAIDS report on the global AIDS epidemic 2013. Geneva: UNAIDS; 2013 [accessed 17 Juni 2016]. Available from: <http://kff.org/global-health-policy/fact-sheet/the-global-hivaids-epidemic/>.
5. National AIDS Commission Secretary. National HIV and AIDS Strategy and Action Plan 2010-2014 [Internet]. Coordinating Minister for People's Welfare Indonesia; 2012. Available from: [http://www.ilo.org/wcmsp5/groups/public/—ed\\_protect/—protrav/—ilo\\_aids/documents/legaldocument/wcms\\_173075.pdf](http://www.ilo.org/wcmsp5/groups/public/—ed_protect/—protrav/—ilo_aids/documents/legaldocument/wcms_173075.pdf).
6. Menteri Kesehatan Republik Indonesia. Statistik Kasus HIV/AIDS di Indonesia sampai Desember 2013. Jakarta. Direktorat Jendral Penyakit Menular dan Kesehatan Lingkungan. Departemen Kesehatan Republik Indonesia, 2013.
7. Komisi Nasional Penanggulangan AIDS; Strategi Nasional dan Perencanaan Aksi Pencegahan HIV dan AIDS 2010-2014. Jakarta. Komisi Penanggulangan AIDS Nasional; 2014.
8. Badriah F, Alkaff R. Metodologi Penelitian Kualitatif. Universitas Islam Negeri Syarif Hidayatullah Jakarta (UIN) Punlisher; Buku, 2013.
9. Luo C, Akwara P, Ngongo N, Doughty P, Gass R, Ekpini R, Crowley S, Hayashi C. Global progress in PMTCT and paediatric HIV care and treatment in low-and middle-income countries in 2004–2005. *Reproductive Health Matters*. 2007 [accessed 16 Juni 2016]; 15(30): 179-89. Available from: <http://www.sciencedirect.com/science/article/pii/S0968808007303273>.
10. Thorne C, Malyuta R, Ferencic N, Mimica J, Eramova I. Towards the elimination of mother-to-child transmission of HIV in low-prevalence and concentrated epidemic settings in Eastern Europe and Central Asia. Europe: World Health Organization and United Nations Children's Emergency Fund: 2011.
11. World Health Organization. HIV/AIDS in the South-East Asia Region: progress report towards millennium development goal 6(a). New Delhi: World Health Organization Regional Office for South-East Asia, in press.; 2012 [accessed 17 Juni 2016]. Available from: <http://apps.who.int/iris/bitstream/10665/127609/1/WP%20on%20MDG%20from%20HSD.pdf>.
12. Hardon AP, Oosterhoff P, Imelda JD, Anh NT, Hidayana I. Preventing mother-to-child transmission of HIV in Vietnam and Indonesia: Diverging care dynamics. *Social Science & Medicine*. 2009 [accessed 16 Juni 2016]; 69(6): 838-45. Available from: <http://www.sciencedirect.com/science/article/pii/S0277953609003402>.
13. World Health Organization. PMTCT strategic vision 2010–2015. Preventing mother-to-child transmission of HIV to reach the UNGASS and millennium development goals. Geneva: World Health

- Organization; 2010 [accessed 20 Juni 2016]. Available from: [http://www.who.int/hiv/pub/mtct/strategic\\_vision.pdf](http://www.who.int/hiv/pub/mtct/strategic_vision.pdf).
14. United Nations Programme on HIV/AIDS. Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. Geneva: Joint United Nations Programme on HIV/AIDS; 2011 [accessed 17 Juni 2016]. Available from: [http://www.unaids.org/sites/default/files/media\\_asset/20110609\\_JC2137\\_Global-Plan-Elimination-HIV-Children\\_en\\_1.pdf](http://www.unaids.org/sites/default/files/media_asset/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en_1.pdf).
  15. Rollins N, Little K, Mzolo S, Horwood C, Newell ML. Surveillance of mother-to-child transmission prevention programmes at immunization clinics: the case for universal screening. *AIDS*. 2007 [accessed 20 Juni 2016]; 21(10): 1341-7. Available from: [http://journals.lww.com/aidsonline/Fulltext/2007/06190/Surveillance\\_of\\_mother\\_to\\_child\\_transmission.14.aspx](http://journals.lww.com/aidsonline/Fulltext/2007/06190/Surveillance_of_mother_to_child_transmission.14.aspx).
  16. Rollins N, Mzolo S, Moodley T, Esterhuizen T, van Rooyen H. Universal HIV testing of infants at immunization clinics: an acceptable and feasible approach for early infant diagnosis in high HIV prevalence settings. *AIDS*. 2009 [accessed 20 Juni 2016]; 23(14): 1851-7. Available from: [http://journals.lww.com/aidsonline/Fulltext/2009/09100/Universal\\_HI\\_V\\_testing\\_of\\_infants\\_at\\_immunization.7.aspx](http://journals.lww.com/aidsonline/Fulltext/2009/09100/Universal_HI_V_testing_of_infants_at_immunization.7.aspx).
  17. World Health Organization. Priority interventions: HIV/AIDS prevention, treatment and care in the health sector. Version 2.0 Geneva: World Health Organization; 2010 [accessed 16 Juni 2016]. Available from: [http://apps.who.int/iris/bitstream/10665/44418/1/9789241500234\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/44418/1/9789241500234_eng.pdf).
  18. Badriah F, Abe T, Baequni B, Hagihara A. Skilled versus unskilled assistance in home delivery: maternal complications, stillbirth and neonatal death in Indonesia. *Journal of Nursing and Care*. 2014 [accessed 2 Juni 2016]; 3: 198. Available from: <http://www.omicsgroup.org/journals/skilled-versus-unskilled-assistance-in-home-delivery-2167-1168-3-198.php?aid=30921>.
  19. Trisnawati LM, Thabrany H. The role of health system to support PMTCT program implementation in Jayawijaya Regency. *Journal of Indonesian Health Policy and Administration*. 2015 [accessed 20 Juni 2016]; 1(1): 8-15. Available from: <http://journal.ui.ac.id/index.php/ihpa/article/viewFile/4929/3386>.