

# Health Notions

Published by: Humanistic Network for Science and Technology



<http://heanoti.com/index.php/hn>

Volume 2 Number 1  
January 2018



# Health Notions

ISSN: 2580-4936  
(online version only)

Published by:  
Humanistic Network for Science and Technology

Cemara Street 25, RT.01 RW.02, Ds./Kec. Sukorejo, Ponorogo, East Java, Indonesia  
63453

Phone: +6285853252665  
Email: hunescite@gmail.com, admin@heanoti.com

<http://heanoti.com/index.php/hn>

"Health Notions" is a media for the publication of articles on research, book review and literature review in the areas of health science and practice such as public health, medicine, dentistry, pharmaceutical, environmental health, nursing, midwifery, nutrition, health technology, clinical laboratories, health education, health information system, health management, and health popular.

## EDITORIAL TEAM

### Editor in Chief:

Dr. Heru Santoso Wahito Nugroho, S.Kep., Ns., M.M.Kes., C.P.M.C.  
Leader & Research Consultant, *Forum Ilmiah Kesehatan* (Scientific Forum of Health);  
Lecturer, Health Polytechnic of Health Ministry at Surabaya, Indonesia.

### Editors:

Dr. David Ackah-Ph.D, CPMC, FPMP, FCISCM, FCICRM, FCE, PGDPM, M.Sc, B.Sc, Dip.  
President, Institute of Project Management Professionals, Ghana.

Dr. Michael Burns-Ph.D.  
Director, Medical Practitioner, Med Hospital USA

Dr. Hadi Prayitno, Drs., M.Kes.  
Lecturer, University of Jember, Indonesia.

Dr. Noer Saudah, S.Kep., Ns., M.Kes.  
Lecturer, College of Health Science "Bina Sehat", Indonesia

Dr. Tri Niswati Utami, S.K.M., M.Kes.  
Lecturer, Islamic University of Medan, Indonesia.

Dr. Muhammad Anshari, Apt., M.M.  
Lecturer, Muhammadiyah University of Banjarmasin, Indonesia.

Dr. Elvis Lotten,  
Dean of Medical School, University of Regional Medicals, Costa Rica.

Dr. Huger Vinnit  
Head of Pharmacy Department, University of Science and Technology, China.

Wiwin Martiningsih, S.Kep., Ns., M.Kep, Ph.D., NS (c)  
Lecturer, Health Polytechnic of Ministry of Health at Malang, Indonesia.

Joel Rey Ugsang Acob, MA, RN, DNS (c)  
Lecturer, Faculty of Nursing, Visayas State University, Philippines.

Auta Tanko Titus, RN, Bsc. Nursing Scie., DPA, ADL, PGDE, MSc. Nur Scie. FWACN  
Deputy Director, Nursing Services, MOH & Hospital Services, Minna, Niger State,  
Nigeria; Lecturer, College of Nursing Sciences, School of Midwifery, Minna, Niger  
State, Nigeria

Dr. Yessy Dessy Arna, S.Kp., M.Kep. Sp.Kom.  
Lecturer, Health Polytechnic of Health Ministry at Surabaya, Indonesia.

Dr. Indah Lestari, S.Kep., Ns., M.Kes.  
Lecturer, College of Health Science "Bina Sehat", Indonesia.

Dr. Kennedy Edem Kukuia  
Neuropharmacologist, University of Ghana Hospital; Lecturer, University of Ghana,  
Ghana.

Dr. Sahrir Sillehu, S.K.M., M.Kes.  
Lecturer, Institute of Health Science "Maluku Husada", Indonesia.

Dr. K. G. Agyenim Boateng  
Physician, University of Ghana Hospital; Lecturer, University of Ghana, Ghana.

Dr. Yunita Satya Pratiwi, S.P., M.Kes.  
Lecturer, Muhammadiyah University of Jember, Indonesia.

Dr. Byba Melda Suhita, S.Kep., Ns., M.Kes.  
Lecturer, Institute of Health Science "Surya Mitra", Indonesia

### Secretariate:

Suparji, S.S.T., S.K.M., M.Pd.  
Secretary, *Forum Ilmiah Kesehatan* (Scientific Forum of Health); Lecturer, Health  
Polytechnic of Health Ministry at Surabaya, Indonesia.

## **FOCUSE AND SCOPE**

"Health Notions" is a media for the publication of articles on research and review of the literature. We accept articles in the areas of health science and practice such as public health, medicine, pharmaceutical, environmental health, nursing, midwifery, nutrition, health technology, clinical laboratories, health education, and health popular.

## **REVIEW**

Article submitted to this journal going through two types of reviews. The first is review by peer reviewers, who are not involved in "Health Notions" management. These reviewers have expertise relevant to the articles assigned to them. In this case, applied "BLIND PEER REVIEW", meaning that the author does not know the reviewers to review the article. The end result of peer review is "RECOMMENDATION".

The second is review done by the editor of "Health Notions". The end result of this review is "DECISION". After it is decided that the article is "ACCEPTED", then the article goes to the editing stage, and then will be scheduled for publication.

Researchers can register as a reviewer for stints reviewing articles that are relevant to their area of expertise. Guidelines for review activities are as follows:

1. Sign up for get a username and password
2. LOGIN using username and password
3. Receiving requests to review articles
4. Approved the task of reviewing
5. Check the article (metadata and attached file)
6. Write down the "results of the review". Reviewer can do a review directly on the article file, then upload it
7. Provide a "recommendation"

**Note:** review is a social duty (non profit).

## **PRIVACY STATEMENT**

The names and email addresses entered in this journal site will be used exclusively for the stated purposes of this journal and will not be made available for any other purpose or to any other party.

## **ARCHIVING**

Health Notions utilizes the Lots of Copies Keep Stuff Safe (LOCKSS) system to create a distributed archiving system among participating libraries and permits those libraries to create permanent archives of the journal for purposes of preservation and restoration.

## **PROCESSING FEE**

This journal charges the following author fees.

Article submission: 0.00 USD (free for charge)

Article publication fee: 200.00 USD (If this article is accepted, you will be asked to pay article publication fee via e-mail).

## SUBMISSION PREPARATION CHECKLIST

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

1. The submission has not been previously published, nor is it before another journal for consideration (or an explanation has been provided in Comments to the Editor).
2. The text typed in article template of this journal.
3. The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines.

## AUTHOR GUIDELINES

"Health Notions" received the original article in the form of research report, book review, or literature review (must contain the results of previous studies) in the field of health, which has never been published, is equipped with:

1. Research license or endorsement page,
2. If the researcher is more than one person, there must be an agreement signed by the researcher sequence all researchers.

Editor has the authority to accept or reject the incoming articles, and the entire article will not be returned to author. Editor is also authorized to change the article, but will not change the meaning contained therein. In student work article (scientific papers, thesis, dissertation, etc.), student is a primary author.

Terms of the article is as follows:

1. Typed in article template of Health Notions (available at footer of this website)
2. The maximum number is 10 pages and must be submitted by online registration

Article must be written in English and meet the following systematic:

1. The title is written no more than 14 words at the center position.
2. The author's full name without a title written under the title, in bold at the center. Beneath it is written the institutions of author.
3. The word "ABSTRACT" typed in capital letters, at the center, and the contents of the abstract are typed in one paragraph, without indentation. Under the contents of the abstract should be added to the maximum five key words.
4. Introduction is written with indentation 1 cm.
5. Methods is written with indentation 1 cm. The contents adapted to the materials and research methods applied in the study.
6. Results is written with indentation 1 cm. If necessary, this section is equipped with tables and images (photographs, diagrams, illustrations and other forms). The title of the tables are written above the table, the position in the center, while the title of the picture written below the image, with the position in the center.
7. Discussion is with indentation 1 cm. In this section, the results are discussed by referring to the literature and the results of other studies.
8. Conclusions and suggestions written with indentation 1 cm. They are presented in a narrative.
9. References written with a hanging indentation 1 cm, referring to the APA style.

## LIST OF ARTICLES

- [Management of Immunization in Public Health Center Related to The Universal Child Immunization \(UCI\) in Arjowinangun Health Center, Malang](#)  
Wiqodatul Ummah, Al Munawir, Farida Wahyu Ningtyias  
1-9
- [Bee Pollen Effect on Blood Glucose Levels in Alloxan-induced Male Wistar Rats](#)  
Aprilia Nurcahyaning Rahayu, Bambang Wirjatmadi, Merryana Adriani, Soenarnatalina M., Dwi Winarni, Sri Hartiningsih  
10-13
- [Simple Foot Elevator for Diabetic Ulcer Treatment \(SIFOEDT\)](#)  
Abdul Majid, Agus Sarwo Prayogi, Surantono Surantono, Sri Hendarsih  
14-17
- [Knowledge, Perception, Attitude and Social Culture as Determinant of Male Participation in Family Planning](#)  
Surya Dewi Puspita, Sri Hernawati, Farida Wahyu Ningtyias  
18-24
- [Food Intake and Food Security as Determinants of Stunting Children Under Five Years](#)  
Ayik Nikmatul Laili, Al Munawir, Farida Wahyu Ningtyias  
25-32
- [The Role of Fetal Health Locus of Control and Obedience in Traditional Pregnancy Care Toward Low Birth Weight \(LBW\) Occurrence in Kupang](#)  
Simplicia Maria Anggrahini, Hari Basuki Notobroto, Rika Subarniati Triyoga  
33-39
- [The Epidemiology and Risk Factor of Lymphatic Filariasis Strains of Wuchereria Bancrofti in Indonesia](#)  
Masriadi Masriadi  
40-44
- [Behavioral Factors of Fruits Merchants of Formalin Content on Imported Apples in Fruit Market of Kendari City](#)  
Isra Khairunissa Irwan Silondae  
45-49
- [Free Sex Behavior of Adolescents in Kendari City](#)  
Jeihan Nabila  
50-56
- [Nutrition Status as Determinant of Incidence of Measles in Jember Regency](#)  
Lailatul Rahmawati, Isa Ma'rufi, Farida Wahyu Ningtyias  
57-61
- [Breastfeeding Counseling to Improve Self Efficacy of Post Partum Mothers in Providing Exclusive Breastfeeding](#)  
Sherly Jeniawaty, Rijanto Rijanto  
62-64
- [Social Support and Substance Abuse Relapse](#)  
Adelia Perwita Sari, Chatarina Umbul Wahyuni, Arief Wibowo  
65-69
- [Meeting Energy and Nutrient Needs of Postnatal Women in Tarak Tradition](#)  
Astutik Pudjirahaju, AAG Anom Aswin, Dwie Soelistyorini  
70-78
- [Cocoa Liquor Increases SOD Activity in Wistar Rats Experiencing Oxidative Stress](#)  
Kartika Wahyu Dwi Putra, Bambang Wirjatmadi, Bambang Purwanto, Merryana Adriani  
79-83



- [Benson Relaxation and Hypnosis in Quality of Elderly Sleep](#)  
Kastubi Kastubi, Rini Ambarwati  
84-87
- [Burdens of Family Caregivers of Stroke Patients: An Integrative Literature Review](#)  
Myrna A Mercado  
88-95
- [Detection of Cervical Cancer Among Female Sex Workers](#)  
Atin Karjatin, Bani Sakti  
96-98
- [Young Khalaal Dates \(\*Phoenix dactylifera\*\) Effect on Blood Glucose in Alloxan-induced Wistar Male Rats](#)  
Desty Muzarofatus Sholikhah, Bambang Wirjatmadi, Merryana Adriani  
99-103
- [Bilirubin Levels in Cases of Neonatal Jaundice Treated with Phototherapy at Kalisat Hospital](#)  
Lulut Sasmito, Ratna Suparwati, Herlidian Putri, Lia Ulfah Luthfiana  
104-106
- [The Knowledge Level and The Obedience of Maternal in Undertaking HIV Test](#)  
Ucik Rochmayanti, Ernawati Ernawati, Ismoedijanto Ismoedijanto  
107-109
- [Mussel Shell Powder as Bio-adsorbent of Heavy Metals in Water](#)  
Darjati Darjati, Marlik Marlik  
110-112
- [The Family Support and Provider Support to Increase Exclusive Breastfeeding Coverage](#)  
Shinta Kristanti, Susanti Pratamaningtyas  
113-117
- [The Effect of Health Facility and Ease of Accessibility on Satisfaction of BPJS PBPJ Participant](#)  
Anggi Sepfana Zizilia, Bagus Setyoboedi, Rachmat Hargono, Kuntoro Kuntoro, Irwanto Irwanto, Nur Mukarromah  
118-120
- [The Influence of Maternal Nutrition Consumption Level During Breastfeeding on Breast Milk Macronutrient Component and Infant's Weight](#)  
Nina Hidayatunnikmah, Roedi Irawan, Budi Prasetyo  
121-127
- [Effectiveness of Counseling to Increase Knowledge and Lower Blood Sugar Levels of Diabetes Mellitus Patients in Tompotikka Sub-district](#)  
Harliani Harliani, Baharuddin Korja  
128-130
- [Identification of \*Aspergillus\* Sp. on Sputum Patient Suspect Tuberculosis at Salotungo Public Health Center of Soppeng Regency](#)  
Nurlia Naim  
131-133
- [Comparison of Immunogenicity of Antigen O \*Salmonella typhi\* Between Isolates from Makassar Strain and Surabaya Strain in Inducing Formation of Specific Antibodies](#)  
Syamsul Bakhri, Bahtiar Bahtiar  
134-139
- [Interaction Between The Ideal Self, Motivation, Academic Goals And Academic Adaptation Towards The Nurse Graduation Competency Test](#)  
Muhammad Nur, Ririh Yudhastuti, Rika Subarniati, Soernarnatalina Melaniani  
140-150

<http://heanoti.com/index.php/hn>



RESEARCH ARTICLE

URL of this article: <http://heanoti.com/index.php/hn/article/view/hn20101>

---

## Management of Immunization in Public Health Center Related to The Universal Child Immunization (UCI) in Arjowinangun Health Center, Malang

---

Wiqodatul Ummah<sup>1(CA)</sup>, Al Munawir<sup>2</sup>, Farida Wahyu Ningtyias<sup>3</sup>

<sup>1(CA)</sup> Post Graduate School of Public Health Science, University of Jember, Indonesia;

willica\_alldama@yahoo.com (corresponding author)

<sup>2</sup> Department of Pathology, Faculty of Medicine, University of Jember, Indonesia

<sup>3</sup> Departement Public Health Nutrition, Faculty of Public Health, University of Jember, Indonesia

---

### ABSTRACT

Malang as a child-friendly city is expected to give a big contribution in the achievement of complete basic immunization so that the number of the incident of diseases that can be prevented by immunization (PD3I) decreased. The decline in the achievement of Universal Child Immunization program in Malang has an impact on the increase of the number of PD3I cases. One of the decreases in the achievement of UCI in Arjowinangun public health center Malang reaching the lowest UCI target due to immunization officer who does not get the immunization technical training, the late reporting of officers from the public health center to the Health Office so that the handling of cases in the field is also too late and the spread of disease is widespread. The purpose of this study is to analyze the management of Immunization Implementation at Arjowinangun Public health center of Malang City. The type of this research is qualitative research conducted with in-depth interviews, observation and documentation with the number of informants as 14 informants consisting of Surveillance and Immunization Section Head, Head of Arjowinangun Public health center, immunization programmer, midwife and nurse and cadre. The result of this study is that immunization officers have never attended immunization technical training, immunization program planning has been done that is determining target number, determining coverage target, calculating vaccine requirement, and calculating need of syringe, safety box and cold chain. However, there are still deficiencies, which are the high number of target owned by the Central Bureau of Statistics (BPS) with the number of real babies in the field. Immunization program implementation has not fully implemented in accordance with Immunization Implementation Guidance because it does not do counseling to baby's parents before immunization is done, the delay of reporting immunization achievement result from programmer to health service, and has never made official report of waste handling. Monitoring and evaluation has been done by Public health center Arjowinangun. Immunization management at Arjowinangun Public Health Center is still not perfect.

**Keyword:** Management, Immunization, Universal Child Immunization

---

### INTRODUCTION

#### Background

One of programs that has been proved effective to push the number of pain and death due to PD3I is immunization<sup>(1)</sup>. One of indicators showing the success of immunization program is the achievement of Universal Child Immunization (UCI). The achievement of UCI is a representation of immunization coverage in baby (0-11 months) nationally to the rural level. Indonesia has determined all target (100%) in village/district has to achieve UCI in 2013, it means that at least 80% baby in every village/district has got complete basic immunization<sup>(2)</sup>.

Basic health research recorded that the complete basic immunization coverage in Indonesia in 2012-2015 decreased compared to that of 2008-2011. In 2014 and 2015, the coverage of immunization did not reach the target expected. The data result from Directorate General of Disease Prevention and Control of Ministry of Health RI recorded that the coverage of UCI village/district in East Java in 2013-2015 decreased. In 2014, the coverage of UCI village/district was as many as 87.50%, this number decreased compared to that of 2013 (87.70%). Meanwhile, in 2015, the coverage of UCI village/district was as many as 75.47%, this number decreased as many as 11.03% compared to that of 2014 (87.70%)<sup>(3)</sup>.



Malang as a child-friendly city is expected to give a big contribution in achieving complete basic immunization. But, in fact, the coverage of UCI's village/district in 2014-2016 in Malang had not achieved the target yet and decreased. The achievement of complete basic immunization in Malang in 2014 reached 89.47%. Meanwhile, the report in 2015 showed that there were 49 of 57 public health center has achieved the UCI target and the achievement in 2015 was as many as 85.96%. In 2016 (66.67%), the coverage of UCI village/district decreased compared to the coverage in the year before as many as 19.29%. Based on the data of Health Office of Malang City, the UCI coverage decreases from 2014-2016. This affect the increasing number of diseases that can be prevented by immunization (PD3I) cases. The number of diphtheria case is as many as 17 cases in 2014, 22 cases in 2015, 32 cases in 2016, and the number of measles cases is as many as 59 cases (2014), 77 cases (2015), and 88 cases (2016). Meanwhile the number of tetanus non neonaturum was as many as 62 cases in 2015 and there were no such cases in the year before. The highest achievement of complete basic immunization in baby was in Mulyorejo Public Health Center. Meanwhile, the lowest achievement of complete basic immunization in baby was in Mulyorejo Public Health Center reaching 25%<sup>(4)</sup>.

The immunization implementer in public health center is a very important element in the immunization services, they have big responsibility in the success of immunization program that is achieving UCI evenly at village level<sup>(5)</sup>. Immunization management activities carried out by public health center include planning, implementation, monitoring and evaluation activities related to UCI achievement. Management activities can have an effect on the success of UCI achievement, so that there is a need to improve implementation management in achieving UCI.

Based on the previous result conducted in the beginning of March 2017 in the form of interview, the immunization program administrator in Arjowinangun public health center has not been appropriate to the regulation on the implementation of immunization. One of the decrease of the achievement of immunization program in Arjowinangun public health center is caused by the quality of human resources which is immunization officer who gets less training about the implementation mechanism of immunization program, the officer who has double job responsibility, the late of officer's report from the public health center to the Health Office so that the case handling in the field is also late and the spreading of diseases widen. The success of a program is caused by management function consisting of planning, implementing, monitoring, and evaluating. Based on the background study above, the researcher is interested to examine the implementation management of immunization by public health center related to the achievement of UCI in Arjowinangun Public Health Center.

## METHODS

This research was an explorative research using qualitative approach. This research was done in Arjowinangun public health center Malang which was done on September-October 2017. The key informants in this research were Section Head of Surveillance and Immunization in Health Office of Malang City, and Head of Arjowinangun public health center. The main informants in this research were 9 people consisting of 1 immunization program manager, 5 implementer midwives and 3 nurses in Arjowinangun public health center Malang. The additional informant in this research were 3 people which were cadres.

There were 2 variables in this research which were input and process variable. Input variable were the officer (age, education, years of work, knowledge, training, and the availability of resources), funding (source, liquefaction process, allocation and reporting) as well as facilities and infrastructure (implementation guidance, reporting form, refrigerator, freezer, vaccine carrier, thermos, cold box) at Arjowinangun public health center. Immunization management process variables ranging from planning of the immunization program (determining the number of targets, determining coverage targets, vaccine needs planning, syringe planning and safety box, and cold chain equipment planning), immunization program implementation (service implementation, vaccine chain management, waste handling, recording and reporting, supervision) and monitoring and evaluation.

Qualitative data collection used interview guides and checklist. The data collection collected using in-depth interview, observation, and documentation.

## RESULTS

The key informant is Section Head of Surveillance and Immunization in Health Office of Malang City, AHPA, S.Kep.,Ners.,M.M, 53 years old and Head of Arjowinangun public health center, drg.CFA, 43 years old with last education of dentistry bachelor. The main informants in this study are 9 people consisting of 1 immunization program manager, 5 midwives and 3 nurses in the work area of Arjowinangun public health center Malang. The additional informants in this study are as many as 3 people, which are cadres. Based on in-depth interview, the following characteristics of informants were obtained:

Table 1. Characteristics of key informants and main informants

Name	Age	Last Education	Years of Work	Role and Responsibility
AHPA	53 years old	Post graduate	9 years	Section Head of Surveillance and Immunization
CFA	42 years old	Graduate	5 years	Head of public health center
H	30 years old	Under graduate	2 years	Immunization program manager
SA	32 years old	Under graduate	8 years	Executor midwife
SH	27 years old	Under graduate	4 years	Executor midwife
MK	29 years old	Under graduate	6 years	Executor midwife
MM	33 years old	Under graduate	4 years	Executor midwife
RL	25 years old	Under graduate	1 year	Executor midwife
EE	28 years old	Graduate	5 years	Executor nurse
SW	32 years old	Under graduate	7 years	Executor nurse
NH	24 years old	Under graduate	2 years	Executor nurse
S	43 years old	Elementary school	9 years	Cadre
NI	37 years old	Elementary school	5 years	Cadre
NJ	39 years old	High school	7 years	Cadre

**Illustration on Input Variable in Complete basic immunization Program in Arjowinangun public health center of Malang City**

The first indicator is knowledge. Knowledge is a result of knowing and this happens after someone experience the sense of an object. Knowledge is the basic thing that has to be had by someone before taking action in doing his/her job, in this case is immunization. Immunization officer has to have knowledge related to immunization before he/she does immunization to the target. The result of interview related to the knowledge about UCI with main informant explains:

*“... UCI is a IDL coverage in baby per district because it is a city, the objective is to know the immunization coverage per district whether the achievement is fulfilled, in my opinion the child predicate has covered the complete basic immunization, district can be said as UCI if it has reached  $\geq 90\%$ ” (H in September 15<sup>th</sup>, 2017).*

This shows that the immunization officer has understood about the meaning Universal Child Immunization program, the objectives of this Universal Child Immunization program, the target of Universal Child Immunization program and the success indicator of UCI.

The second indicator is the training history that has been attended in the last 3 years, midwives or nurses that become immunization officer that have not attended any technical training yet related to immunization, the one who attends the training is only the immunization coordinator. This is clarified by key informant:

*“...All the immunization coordinator has attended the training, but the immunization officer who has attended the training is less than 80 percent” (Section Head of Surveillance and Immunization in October 2<sup>th</sup>, 2017).*

The third indicator is the availability of resources, immunization activity is only able to be done by immunization officer having medical or nursery educational background or other competent officer. To increase the knowledge and or ability, immunization trainer and officer have to get training. The interview result shows that the immunization officer in Arjowinangun public health center has a qualification based on Regulation of the Minister of Health No. 12 of 2017 about Guidelines for Immunization Implementation which are midwifery and nursery graduate, but it is not special immunization officer, rather midwife or nurse performing another job.

The fourth indicator is funding as well as facilities and infrastructure. The interview result shows that accommodation fee to take the vaccine uses operational fund from public health center. It shows that there is no fund that is needed to implement this immunization. Arjowinangun public health center has complete instrument and facilities and infrastructure for immunization. This is clarified by the interview result with informant:

*“... the picking up from the public health center to the Health Office uses BOK funds” (H on September 15, 2017)*

*“...The facilities and infrastructures here are complete and it functions well. It can be seen in our inventories list, in the corner. The maintenance is by keeping the temperature stable around 2-8°C” (H in September 15<sup>th</sup>, 2017)*

**Illustration on Planning of Complete Basic Immunization Program in Arjowinangun Public Health Center of Malang City**

The distribution of planning of complete basic immunization Program consists of some indicators used to determine the target number, determine the coverage target number, calculate the number of vaccine needs, plan

the need of syringe and safety box and plan the need of cold chain equipment. The indicators in planning immunization program that have mentioned before is able to be explained below.

a. Determining the target number

The interview result with main informant explains:

*"...there has been from Health Office, it just need to be divided per months about how many target should be achieved in that month" (SA on September 19<sup>th</sup>, 2017).*

*"...every year, make a plan about the target number that will be immunized. It is from Health Office. There, there have been the number of the baby then it is distributed to each programmer. So, the planning is seen from the number of the baby before. That is the reference if we want to make a planning of target number" (EE on September 19<sup>th</sup>, 2017).*

The interview result shows that before doing planning of vaccine needs, the process of determining immunization target number in a year that will be served is done first in the work area of Arjowinangun public health center. It shows that Arjowinangun public health center has done planning of target number in every district consisting of 4 districts. The target for every kinds of immunization service activity in Arjowinangun public health center is calculated based on children under five, where the data is gained from Health Office of Malang City.

b. Determining the coverage target

Interview result with key informant explains:

*"...in accordance to the number of population and the baby, the officer just needs to breakdown the target by his/herself" (AHPA on October 02, 2017).*

Interview result with main informant explains:

*"....there has been from the department" (MM on September 16,2017).*

Determining the coverage target is determining how big immunization coverage that will be achieved in the year planned and it can be used to know the number of vaccine needed. Based on the interview result shows that the coverage target in Arjowinangun public health center is determent by Health office of Malang City that is adjusted to the number of population and the children under five that are there in the working area of Arjowinangun public health center.

c. Planning of vaccine needs

The interview result with main informant explains:

*"....There has been the software, we just need to fill it and we make the planning of vaccine needs every month in accordance to the last year IP plus 5%" (H on September 15<sup>th</sup>, 2017).*

The interview result shows that Arjowinangun public health center in counting the vaccine needs is in accordance to the number of baby in every district which will get the immunization and the number of integrated service post (POSYANDU) in the work area of Arjowinangun public health center. Based on the documentation study, it shows that the number of BCG vaccine needs per 30 June 2017 as many as 15 vaccines, DPT-HB as many as 30 vaccines, Polio as many as 30 vaccines, measles as many as 30 vaccines spreading in 4 districts in the work area of Arjowinangun public health center.

d. Planning of syringe, safety box and cold chain

*"....the planning is made by immunization coordinator, starting from 2017 public health center is not allowed to arrange by themselves, all planning is from the Health office and if is not enough, they can add by using BOK fee."(AHPA on Monday, October 2, 2017).*

The interview result with main informant explains:

*"....There has been from the Health office, so we receive the syringe, safety box and cold chain from the department which are customized with the target number will be immunized"(SW on September 16, 2017).*

Based on the interview result, it shows that Arjowinangun public health center does planning of syringe, safety box, and cold chain needs which is customized with target number will be immunized.

### **Illustration on the Implementation of Complete basic immunization Program is Arjowinangun Public Health Center Malang City**

The implementation of immunization program is as important as the planning. This implementation consists of services, vaccine chain management, waste handling, recording and reporting, as well as supervision.

a. Services

The interview result with main informant explains:

*"... preparations for immunization services should be prepared by the officers on duty, DTT cotton, solvents, syringes, vaccines and safety boxes and cohort books"(MK on September 26, 2017).*

*"... The schedule has been determined by the decree from the head of the public health center, the counseling is when the activity goes on. The name is integrated service post so it is all there, if the counseling before the integrated service post officers cannot rest, every day out and that also come home at 12 or more"(H on September 15, 2017).*



Based on the interview results, it shows that before doing immunization, it should prepare the immunized officers, syringe equipment and vaccines as well as prepare safety box first. The counseling activities are not conducted to infant parents about the benefits of immunization, side effects after being immunization and losses if not immunized. This activity is done by cross-program and cross-sector cooperation. In addition, Arjowinangun public health center has coordinated through cross-program and cross-sector. Cross-program collaboration covers the region, environmental health, nutrition, health promotion, KIA, while cross-sector cooperation includes village chief, team of family welfare program, and cadre in the work area of Arjowinangun public health center. This shows that Arjowinangun public health center has been providing immunization services in accordance with the prepared plans such as staff preparation, service delivery and coordination with cross-program and cross-sector but not on community preparation through counseling activities. This is reinforced by statements from additional informants:

The interview result with the additional informant explains:

*"....There is no counseling before services integrated post here, the counseling is done when the people come here, the midwife will do it (S on October 1, 2017).*

b. Vaccine chain management

The interview result with main informant explains:

*"....the vaccine has been provided by the Health office, then I put it in the cold chain, then the officers on duty will come and fill the attendance then they take it based on the immunization need on that day" (MM on September, 2017).*

Based on the interview result, it shows that the vaccine has been provided from the Health Office of Malang City and stored in the cold chain. When will be immunized, the midwife or nurse at the public health center in charge of taking the vaccine using a thermos then take it to the local service integrated post. Vaccine storage in the refrigerator is based on the standard temperature of 2-8°C. Based on documentation study at Arjowinangun public health center shows that equipment used in vaccine chain management to keep vaccine at the specified temperature that is there is one special refrigerator storage vaccine, 3 vaccine carrier equipped with 4 cool pack @ 0,1 liter. Thus shows that the management of the vaccine chain at Arjowinangun public Health Center is in accordance with Guidelines for Immunization Implementation, ranging from the procurement of vaccines directly obtained from the Health Office of Malang, storage of vaccines in the refrigerator, vaccination from the Health office of Malang using cold chain.

c. Waste handling

Sharp object rubbish is able to cause serious health and environmental problems. All used syringe and vaccine should immediately be inserted into safety box.

The interview result with key informant explains:

*".....from the collected safety box directly submitted to environmental Health and there has been no official report ..." (S on September 25, 2017).*

Based on the interview results, it shows that before doing every immunization service, the officers provide safety box. The syringe used for immunization is saved inside the safety box and then directly given to environmental Health. The official report for waste handling has not been in accordance to Regulation of the Minister of Health No. 12 of 2017 on Guidelines for Immunization Implementation which states must be included official report in handling waste. It shows that waste handling in immunization service in Arjowinangun public health center has been done save but it has not been in accordance to then Guidelines for Immunization Implementation, which is the availability of official report waste handling.

d. Recording and reporting

The interview result with main informants:

*".....the recording is directly saved in the infant cohort then it is recapitulated every month and it is validated per month using book we make then we give a sign using colored marking pen that it has been reported. In some years before, the coverage in public health center was really bad because the validation was done only in the end of the year so that sometimes lost reporting happened, there were some people that do not want to be immunized because of various reasons such as religion factor, afraid of being fiver. It was also because of high mobilization like the many people in Mergosono live in a boarding house or even move, so the complete basic immunization is not covered" (H on September 15, 2017).*

*"....Sometimes, the report is late to be reported like months before, date 8, because there was MR campaign, there are also friends from another office does not give report to the health office" (H on September 15, 2017).*

Based on the interview results, it shows that the recording of immunization activity result is saved to infant cohort and is reported by immunization programmer to Health Office every month before date 5 in the next month. But, in fact, the report system from Arjowinangun public health center to Health Office of Malang City is not on time. Based on the documentation study, Arjowinangun public health center can show the record and report of the immunization activity. The record is the recording of child under three routine immunization and the recording of vaccine stock. Besides, the immunization activity reports consist of immunization report, following effect after immunization report and vaccine uses report that are filled

completely and on time. Based on the interview result on 15 September 2017, it shows that there is a high mobilization of population in Mergosono and some parents refuse to immunize their children because of religion factor and afraid of fever after immunization.

e. Supervision

*"....every month, the mini-workshop is usually declared same by the head of public health center" (SA on September 19, 2017)*

*"....thing that is supervised by the head of public health center is the coverage, it has all been UCI or not..."(NH on September 221, 2017)*

Based on the interview results, it shows that supervision has been given by the head of public health center as a responsible person in immunization program to all staff in Arjowinangun public health center that is done monthly using mini-workshop. Things supervised are coverage and target of immunization, immunization equipment and vaccine as well as UCI achievement in every district. Based on the documentation study, it shows that in 23 May 2017, it was done public health center mini-workshop in Arjowinangun public health center attended by head of public health center and 49 participants. The mini-workshop discussed about administration, mother and child health, uncontagious diseases, school health unit, nutrition, health promotion and immunization, and all the district has considered UCI.

### **Illustration on Monitoring and Evaluation of Complete basic immunization Program in Arjowinangun Public Health Center of Malang City**

a. Monitoring

The interview result with key informant explains:

*"....the monitoring is once a month. For example we need sweeping or not. There should be my signature in the report they give to me every month. It is seen why the coverage can be less, the cause and what effort should be done..."(CFA on October 4, 2017).*

*"...report to the head of public health center to be monitored what is less, the obstacle and the solution..."(H on September 15, 2017).*

Based on the interview results, it shows that the head of public health center do monitoring toward the immunization activity every once a month. This aims to know what kinds of obstacle or what less during the immunization services and to get a follow up. Monitoring is an activity done by head of public health center to see, monitor the ongoing immunization activity and evaluate the goal achievement, see the proponents and obstacles in the implementation of immunization program.

b. Evaluation

*"....Every month it is held a routine meeting in the public health center to discuss the immunization program. So, we do evaluation every month. There are 2 meeting, monthly workshop and mini-workshop. In monthly workshop, it is attended by internal parties, which are the head and the staffs of public health center. In mini-workshop, it is attended by cadres. In this time, we do an evaluation through monthly workshop and mini-workshop" (CFA, October 4, 2017)*

*"....the head of public health center usually held monthly workshop and mini-workshop...(SA on September 19, 2017).*

Based on the interview results, it shows that it has been done an evaluation about the implementation of immunization through routine meeting in Arjowinangun public health center that is attended by internal parties of public health center. Based on the research through in-depth interview and documentation, it shows that the public health center has done monitoring and evaluation toward immunization, so it can be said that it has been in accordance to the Guidelines for Immunization Implementation mentioning that monitoring and evaluation are the last part of the implementation management process of immunization program having an important role in knowing the success of immunization program. By doing so, the deviation can be detected, prevented and controlled. If there is a deviation, it has to be solved.

## **DISCUSSION**

### **Illustration on Input Variable and Complete basic immunization in Arjowinangun Public Health Center of Malang City**

The indicators of input variable are knowledge, technical training, the availability of resources, funding and facilities and infrastructure. The research shows that the resources standard in Arjowinangun public health center has had a appropriate qualification and has understood the UCI program, the goal of the program, the target of UCI and the success indicator of UCI but the immunization officers have not attend any immunization technical training yet. This is not in accordance to Regulation of the Minister of Health of RI on Guidelines for Immunization Implementation stating that the standards of immunization officers are midwives and nurses who



have attended immunization training<sup>(2)</sup>. To increase the knowledge and or ability of the trainer and officers, it needs to be done training. The immunization officers attending training are given training sighth in the form of training certificate and have a basic material module of immunization program. The inappropriateness in the standard of resources and technical training is caused by the focus on the management of immunization program in attending resources that the immunization officers. Based on the interview results, it shows that the accommodation fee to take the vaccine using operational fee from public health center. It shows that there is no other fund needed related to the immunization implementation in the field such as vaccine needs, syringe needs, safety box, and cold chain. Meanwhile, the immunization facilities and infrastructures in Arjowinangun public health center has been complete and function well.

### **Illustration of Planning of Complete basic immunization Program in Arjowinangun Public Health Center of Malang City**

The first indicator is determining the target number. Based on the research has done, it shows that Arjowinangun public health center has done planning of target number in every district. The target for every kinds of immunization service activity in Arjowinangun public health center is calculated based on the number of population and children under five, where the data is gain from Health Office of Malang City. This is in accordance to Regulation of the Minister of Health of RI on Guidelines for Immunization Implementation which states that the targets for each type of immunization service activity are calculated based on population numbers, population growth and birth rates from the population census or Inter Population Survey (SUPAS) conducted by the Central Bureau of Statistics (BPS)<sup>(2)</sup>. However, there are still deficiencies in the use of Inter Population Survey data (SUPAS), ie the difference in the number of targets with the number of real babies. Compliance in the determination of the number of targets is because this activity is one of the important activities to be used as the basis of planning, implementation and monitoring and evaluation of the implementation of immunization in Arjowinangun Public health center.

The second indicator is determining the target coverage. Based on the research has done, it shows that Arjowinangun public health center has done planning of target coverage number based on Local Area Monitoring in each district of the work area in Arjowinangun public health center. This is in accordance to the Regulation of the Minister of Health of RI stating that target coverage is gained by analyzing situation<sup>(2)</sup>. In analyzing situation, the public health center prepares data of area, resources number, immunization equipment number, service unit, pain, death, Local Area Monitoring result, and evaluation result year before. By making Local Area Monitoring graphic per district every month, he coverage result can be analyzed and the tendency of every kinds of immunization can be known. The appropriateness in determining the coverage target can help to know the burden or coverage should be achieved every month, and if it is not done so the burden will accumulate and the UCI in the district is difficult to achieved.

The third indicator is vaccine need planning. Based on the research has done, it shows that Arjowinangun public health center has done vaccine need planning and it has been in accordance to the Guidelines for Immunization Implementation stating that the public health center send the vaccine need plan to the city. The compilation is done by the regency and then the number of needs per district is delivered to province to be continued to center to do supply process.

The forth indicator is planning of syringe, safety box, and cold chain. Based on the research has done, it shows that Arjowinangun public health center has done planning of needs. This is in accordance to Regulation of the Minister of Health of RI stating that the planning of syringe and safety box needs cannot be separated with the vaccine need planning<sup>(2)</sup>. Besides, planning of cold chain is made specifically to keep the potential of vaccine. Calculation of the syringe need is based on the coverage number will be achieved in this year and the number of immunization doses.

### **Illustration of the Implementation of Complete basic immunization in Arjowinangun Public Health Center of Malang City**

The first indicator is services. Based on the research has done, it shows that Arjowinangun public health center has implemented immunization service in accordance to the plan made such as officer preparation, giving services and doing coordination cross-program and cross-sector. This is in accordance to Regulation of the Minister of Health of RI stating that immunization is demanded to do program effective and efficient<sup>(2)</sup>. So, the immunization program manager should be able to do the coordinative function well, which is by doing cross-program and cross-sector coordination. But, the service has not been done based on with Regulation of the Minister of Health of RI lies in the preparation of public services because the counseling activity about the benefits of immunization, side effect after immunization and disadvantages if it is not immunized is not done to the infant's parents<sup>(2)</sup>. The appropriateness of immunization service is caused by the preparation and activation of society have to be done to succeed the immunization service. The mobilization of the implementation is a boost for teamwork

to achieve the goals set out in the immunization work plan through coordination efforts. Coordination needs to be done to build teamwork so that simple management within the scope of the immunization program is created, especially in the division of tasks and the creation of a daily work plan.

The second indicator is vaccine chain management. Based on the research done, it shows that the vaccine has been provided by Health Office of Malang City and saved in the cold chain. When the immunization will be done, midwives or nurses in the public health center on duty take the vaccines using thermos then bring it to the integrated service post. This is in accordance to Regulation of the Minister of Health of RI stating that the vaccine chain management consists of vaccine supply, vaccine saving and vaccine use. During the immunization service, the vaccine and its soluble have to be saved in vaccine carrier using cool pack to keep the temperature of 2°-8°C and the sensitive vaccine toward freezing does not freeze<sup>(2)</sup>.

The third indicator is waste handling. Based on the research, it shows that the waste handling on Arjowinangun public health center does not enclose official report for waste handling. Besides, the waste handling in Arjowinangun public health center has been done safely, which is the availability of safety box in every immunization service that is done. This is in accordance to Regulation of the Minister of Health of RI on Guidelines for Immunization Implementation stating that all of used syringe is saved into the safety box<sup>(2)</sup>. This box is water and pin resistant so that the pin cannot emerge and if there is not safety box, it can use local material such as carton paper to make sharp object container which is save and functional. The appropriateness in waste handling caused by the waste of immunization services can cause health problem, environment pollution and danger if it is not done safely. So that there is a need in specific handling of syringe waste or others.

The fourth indicator is recording and reporting. Based on the report, it shows that recording and reporting of immunization in Arjowinangun public health center has been in accordance to Guidelines for Immunization Implementation consisting of recording of child under three routine immunization and vaccine stock, meanwhile the reporting consist of reporting of immunization, follow-up event after immunization and also reporting of vaccine used that is filled completely and on time. Recording and reporting of immunization in Arjowinangun public health center can be seen in the appendices. This is in accordance to Regulation of the Minister of Health of RI stating that recording in public health center level consists of coverage result, vaccine recording, refrigerator temperature recording and logistic recording<sup>(2)</sup>. This recording is done by immunization implementer and the recording is from public health center to the city level at least date 5 the next month. The appropriateness in recording and reporting take an important role and determine the immunization program management. Besides supporting the immunization service, it is also a basic to make planning or evaluation.

The fifth indicator is supervision. Based on the research, it shows that supervision has been done by the head of Arjowinangun public health center monthly through public health center mini-workshop. This is in accordance to Regulation of the Minister of Health of RI stating supervision is really needed to increase the quality of program<sup>(2)</sup>. Public health centers get supervision from regency officer or Health Office, meanwhile the immunization officers get supervision from the head of public health center. Things supervised are coverage and target of immunization, diseases that can be prevented by immunization (PD3I) data, human resources, immunization equipment, vaccine and cold chain, recording and reporting, result of cross-program/sector, and problems found. The appropriateness in supervision done because the head of Arjowinangun public health center want to increase the quality of immunization program that is done and achieve the final goal of immunization program that is decreasing pain and death rate because of diseases that can be prevented by immunization (PD3I).

### **Illustration of Monitoring and Evaluation of Complete basic immunization Program in Arjowinangun Public Health Center of Malang City**

Monitoring and evaluation activities aimed at a program that is or has been going on. Based on the research shows that Head of Public health center Arjowinangun as the responsible immunization program has conducted monitoring activities once every month. This is in accordance with the Regulation of the Minister of Health of RI on Guidelines for Immunization Implementation stating that monitoring is an activity undertaken by the leader to see, monitor the organization during the activities and assess the achievement of goals, see the supporting factors and inhibit the implementation of the program<sup>(2)</sup>. Monitoring tools owned by immunization programs are Local Area Monitoring that serves to increase coverage, so it is more to monitor the quantity of the program. Local Area Monitoring creation is based on the principle of being used alone or as feedback to be able to take action rather than just being sent as a report. If the Local Area Monitoring is not done, it will not be able to assess the achievement of goals and see the supporting factors and inhibiting the implementation of the program so it cannot make the decision properly. The analysis related to Local Area Monitoring result is only done by coordinator immunization at public health center.

The appropriateness in monitoring is because Head of public health center want to know what constraint happened during immunization service and then get follow up. In monitoring (monitoring) collected data and analyzed, the results of the analysis are interpreted and interpreted as input for the leader to make improvements. Based on the research indicates that in addition to monitoring activities, informants also explained that there are

evaluation activities on the implementation of immunization, namely by holding routine meetings at the public health center. The meetings include monthly workshops and mini workshops. This is in accordance with the Regulation of the Minister of Health of RI on Guidelines Immunization Implementation which states that the purpose of the evaluation is to know the results or process activities when compared with the target or expected<sup>(2)</sup>. One of follow up of Local Area Monitoring making is utilizing Local Area Monitoring at a meeting held at Public health center. The meeting is a mini-workshop at Public health center level conducted every month. Local Area Monitoring is used to inform the results achieved by the Public health center, identify problems, plan improvements and preparation of operational plans. The appropriateness in the evaluation is to know the results of immunization activities with target coverage expected by public health center Arjowinangun. Several evaluation activities are conducted routinely in the immunization program. One that needs to be evaluated is coverage per year. For each antigen the coverage chart per year can provide an overall picture of the likely trends in achieving immunization coverage, an indication of a problem and a reference to improve the policy or strategy that needs to be taken for the next year.

## CONCLUSION

Based on the analysis result and discussion about the management of the implementation of basic complete immunization in Arjowinangun public health center of Malang City, it can be concluded that midwives and nurses who become immunization officers have never attended the immunization-related technical training, which has been followed only training immunization coordinator only. Complete basic immunization program planning includes determining the number of targets, determining coverage targets, vaccine needs planning and syringe planning, safety boxes and cold chain equipment needs. The problems encountered in planning are the high number of infants determined by the Central Bureau of Statistics (BPS) and are not suitable or at odds with the actual number of babies in the area. Immunization program implementation includes service, vaccine chain management, waste handling, recording and reporting and supervision. Problems in the implementation that has not run properly is on the counseling before the service has not been implemented, the absence of news events handling waste, recording and reporting that has not been optimal and not timely gathering so often lost reporting. Monitoring and evaluation of immunization program at Arjowinangun public health center has been run in accordance with the provisions in Regulation of the Minister of Health of RI, No. 12 in 2017.

## REFERENCES

1. Kemenkes RI. Basic Health Research (Riset Kesehatan Dasar). Jakarta: Balitbangkes Kemenkes RI; 2011.
2. Kemenkes RI. Regulation of The Minister of Health of RI Number 12 in 2017 on Guidelines on Immunization Implementation (Peraturan Menteri Kesehatan RI Nomor 12 Tahun 2017 Tentang Pedoman Pelaksanaan Imunisasi. Indonesia; 2017.
3. Kemenkes RI. Basic Health Research (Riset Kesehatan Dasar). Jakarta: Balitbangkes Kemenkes RI; 2015.
4. Dinkes Kota Malang. Data of Diphtheria Case 2014-2016 (Data Kasus Difteri Tahun 2014-2016). Malang: Dinas Kesehatan Kota Malang; 2016.
5. Ministry of Health RI. 2010. Decree of the Minister of Health of RI Number 482/MENKES/SK/IV/2010 on National Immunization Acceleration Movement of Universal Child Immunization 2010-2014 (gain UCI 2010-2014). Indonesia; 2010.