

Outbreak Response Immunization Against Diphtheria in East Java Province in Indonesia 2018

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INTRODUCTION

There has been a high number of diphtheria cases in East Java, one of the leading provinces in Indonesia since 2011 with a total population of 35 million people. The highest incidence of this disease was recorded in 2012. Despite many efforts performed by the government, the outbreak continues.^{1,2}

In 2018, the governor of East Java Province decided to perform a three-round outbreak response immunization (ORI) in 2018 to reduce the new cases significantly. This program was initiated by the central government in December 2017, covering some other provinces in Indonesia. Originally, not all districts would be involved in the program. Minister of Health of Indonesia only instructed less than half of the districts in East Java Provinces to be part of ORI programme. However, the governor considered to broaden the ORI and at last all 38 districts were involved.

During the last 6 years, this was not the only ORI in East Java Province. The provincial health office already performed the ORI in 2013-2014 but failed to complete it in time because of several unavoidable reasons, such as the financial problem and the lack of vaccine supply.³

In the beginning, the ORI was plan to be done by three rounds activities on February, March and July or August 2018. The financial situation did not support this plan and in the end the program was performed on February, June, and November 2018. The aim of this work was to report a surveillance study of ORI in East Java Province in 2018

MATERIAL AND METHODS

This ORI targeted children and adolescents from 1 to 19 years old, regardless the previous immunization history. DPT, DT, and TD vaccines were used according to the age. Ninety percent coverage was the target.

The surveillance reports were collected from 38 districts on daily, weekly, and monthly basis. Every day the district health officer sent the report from that particular day. After one week, the same officer would calculate the total number for that particular week. The similar thing was done after one month. The Provincial Health Office was the central data collector. The reported data included the identity of the children (such as name, age, and sex), the address, and the name of the parents. Descriptive calculation and reports include the coverage on the districts, sub-districts, and for each community health centers in the region.

RESULTS

All 38 districts followed the guideline to send the report on the daily, weekly, and monthly basis. Three quarter of all districts needed more than one month to cover the whole area for each round. The delay of the second and the third round was inevitable since the vaccine supply from the central government was disrupted.

For the first, second, and third round, the overall coverage was 97%, 94.19%, and 93.20%, respectively. The absolute numbers of the coverage were 10,508,354 (1), 10,234,005 (2), and 9,961,057 (3) children and adolescents. Even though the target was passed, the distribution of the districts and subdistricts were not similar. One, three, and twelve districts could not reach the minimum limit on the first, second, and third round, respectively. Most of those failed districts were located on the north and eastern part of the province.

DISCUSSION

In many diphtheria outbreaks, ORI was performed in Russia, Lao, India, and other countries.⁴⁻⁸ The average results of all rounds was above the minimal target. In many diphtheria ORI activities in the world, the minimal target coverage was 90%. There will not be enough impact if the coverage was less than that limit.^{4,5}

The northern and eastern part of the province (which also known as “horse-shoe area”) were the location of the highest incidence of diphtheria patients. In the same districts, the coverage of routine immunization was the lowest in the province. The similar situation was reflected also in this ORI. The result from that particular area was not very good.²

The best scenario for ORI schedule was 0-1-6 months. However, some difficulties delayed the second and third round. This problem also reduced the spirit of the health officer to perform the last two rounds. Therefore, the coverage was lower and the time needed was longer.

There was previous diphtheria ORI in East Java Province in 2013/2014 but at that time the health officers needed more than one year to complete the schedule of three rounds ORI, with lower than 90% coverage. The age target was also different (1-15 year old) from this latest

ORI. We did not see much impact from the previous ORI and the number of diphtheria patients in 2014 and 2015 were stable.^{2,3}

We predict the impact of these three round ORI was not rapidly seen since the number of diphtheria cases for the whole year (753) was higher than the last three years (2015:319, 2016:350, and 2017:460; data from the East Java Health Office). The evaluation will be performed in 2019 (the whole year) in order to make a better comparison. The mechanism of data collection from all districts is maintained.

CONCLUSION

The coverage of three round ORI were above the minimum target but in unbalanced distribution. We need several months in 2019 to know and understand the impact of this program.

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Certificate of Attendance

This is to certify that

Dominicus Husada

Attended the sessions listed in the appendix below during the:

**37th Annual Meeting of the
European Society for Paediatric Infectious Diseases**

Held in:

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Marko Pokorn

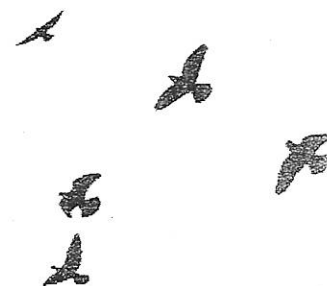

Goran Tešović

Chairs, ESPID 2019 Meeting



Session Attendance

Title	Date	Time
INDUSTRY SYMPOSIUM 3	06/05/2019	14:45 - 16:15
INDUSTRY SYMPOSIUM 4	06/05/2019	16:45 - 18:15
INDUSTRY SYMPOSIUM 5	06/05/2019	18:30 - 20:00
INDUSTRY SYMPOSIUM 6	07/05/2019	08:00 - 09:15
INDUSTRY SYMPOSIUM 7	07/05/2019	09:30 - 11:00
INDUSTRY SYMPOSIUM 8	07/05/2019	11:30 - 13:00
INDUSTRY SYMPOSIUM 9	07/05/2019	13:45 - 15:15
PIDS/ESPID JOINT PLENARY SYMPOSIUM - THE FUTURE OF VACCINES (IS NOW)	07/05/2019	15:30 - 17:00
ESPID PLENARY 2 - OPENING SYMPOSIUM - ANTIBIOTIC USE ACROSS EUROPE – DIFFERENCES AND CHALLENGES	07/05/2019	17:30 - 19:30
ADVAC SESSION	07/05/2019	20:00 - 21:30
MEET THE EXPERT 5 - PREVENTION OF VERTICAL TRANSMISSION OF HIV	08/05/2019	07:00 - 07:50
PLENARY SYMPOSIUM 3 - ONE HEALTH – THE HUMAN – ANIMAL INTERFACE	08/05/2019	08:00 - 09:30
ORAL PRESENTATION SESSION 3 - NEONATAL INFECTIONS	08/05/2019	10:00 - 11:00
ESPID SYMPOSIUM 1 - PAEDIATRIC SEPSIS	08/05/2019	13:40 - 15:10
ESPID SYMPOSIUM 2 - VACCINE CHALLENGES	08/05/2019	13:40 - 15:10
ESPID SYMPOSIUM 3- PERINATAL INFECTIONS - THE MOTHER - INFANT PAIR	08/05/2019	13:40 - 15:10
ESPID SYMPOSIUM 8 - CONGENITAL CMV INFECTION	08/05/2019	15:40 - 17:10



ESPID 2019 Travel Award Notification

Yahoo! InBox

- **Diyana Yosifova** <dyosifova@kenes.com>

To: dominicushusada@yahoo.com

1 Mar at 6:39 pm

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Dear Dr. DominicusHusada,

We are pleased to inform you that your application was accepted to receive the ESPID Annual Meeting Travel Award. Accepted applicants receive benefits including support for economy class air and/or train travel to Ljubljana, Slovenia, accommodation for up to 5 nights at the Park Hotel, and free registration for the Meeting.

Please note: Applicants are required to register, book their accommodation, and contact the travel agency by March 12, 2019. Applicants who fail to do so will be removed from the award scheme entirely. It is essential that you follow the procedures set out below. Bookings done independently WILL NOT BE REIMBURSED.

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Please contact the official travel agent at: esp-id-grant@cwit.co.il with your required arrival and departure dates and the airport and/or railway station from which you will be travelling to the Meeting. Please send as well: names as in passport, gender, date of birth and mobile number. Please note that the offered travel options which meet your allocated travel amount may be direct or indirect flights and, for train travel, may be at off peak times.

- If you are travelling by air, please note that travel between your home and your local airport, and between the Ljubljana airport and the venue cannot be funded as part of the travel support. You will need to cover these costs yourself.
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We look forward to seeing you in Ljubljana!

Best wishes
ESPID 2019 Meeting Organiser