INA RESPOND
INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

INA-RESPOND Secretariat

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Newsletter October 2015

In This Issue

Global Hand Washing Day 2015

Do you always clean your hands? Growing up, our parents taught us to always clean our hands using soap regularly. We probably even had our favorite types or smells of soap. Getting soap is probably quite easy for us who live in big cities, and they are usually quite cheap. But not everywhere!

Millions of children in developing countries die every year because of diarrhea or respiratory infections they've picked up. This is why it is important to educate our children the importance of washing their hands properly.

The 2015 theme for Global Hand Washing Day is "Raise a Hand for Hygiene". Global Hand Washing Day wants to draw awareness to hand washing because it is something often neglected. The idea is to show people the benefits of turning hand washing into an automatic response - making it a habit could save more lives than a vaccine or other medicine could do.

In this newsletter, we are going to show you how to properly wash your hands to reduce the number of germs that may cause serious illness.

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INA-RESPOND Network Member Profile

In this edition, we are featuring our network's Head of Clinical Laboratory, Dr. Dewi Lokida, Sp.PK, from the Regional General Hospital Tangerang, Indonesia. Find out more about her here.

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Save The Date

The INA-RESPOND network is undergoing some exciting changes and development, as it grows bigger and more professional. Having it said, these are some of the trainings and meetings we are going to have in the near future:

19 – 23 Oct	Methods in Epidemiologic, Clinical and Operations Research (MECOR) @Harris Hotel, Bekasi
28 - 29 Oct	Future Testing for INA-RESPOND's AFIRE specimens @Badan Litbangkes, Jakarta
11 – 12 Nov	INA-RESPOND Network Steering Committee Meeting @Luwansa Hotel, Jakarta

*Tentative

For further information and details about the meeting, please contact us at the INA-RESPOND Secretariat, Jakarta. Phone: +62 21 42879189 ext. 102 or 112. Ask for Mr. Dedy Hidayat or Ms. Yayu Nuzulurrahmah

October Birthday

2 Oct	dr. Debby Intan Permatasari	RA INA101 Site 540
5 Oct	Ms. Linda Oktabriana	LT INA102 Site 580
7 Oct	dr. Venty Muliana Sari	RA INA101 Site 560
11 Oct	Ms. Ni Nyoman Eriyanti	LT INA101 Site 520
15 Oct	dr. Ninny Meutia Pelupessy, Sp.A	Site PI INA101 Site 550
16 Oct	dr. Dwiyanti Puspitasari, Sp.A	Co-PI INA101 Site 570
	Ms. Salfia Dian Lastari	Secretariat
17 Oct	Ms. Deni Pepy R. Butarbutar	Secretariat
20 Oct	dr. Abu Tholib Aman, MSc, PhD, SpMK (K)	NSC at Site 580
21 Oct	dr. Nurhayana Sennang, M.Kes, Sp.PK, DMM	Co-PI INA101 Site 550
21 Oct	Mr. Handoko Setiawan	LT INA101 Site 540
22 Oct	dr. Kartika Paramita	RA SEA050 Site 42
26 Oct	dr. Syndi Siahaan	RA INA101 Site 510
28 Oct	Mr. Tri Kusuma Wardhani, A.Md	LT INA102 Site 560
30 Oct	dr. Iman Firmansyah,Sp.PD, FINASIM	Co-PI INA101 Site 540

INA-RESPOND Team @ 2015 ILS Meeting

International Leptospirosis Society (ILS) Meeting

Leptospirosis is a zoonosis that it is transmitted from a wide variety of agricultural, companion, and wild animals to people. Animals shed leptospires from their kidneys into the environment. Humans acquire infection through direct contact with infected animals or indirect exposure to contaminated water or soil.

International Leptospirosis Society (ILS), which was established in 1994, is an organization to promote knowledge on leptospirosis. The ILS has 5 objectives: to create awareness about leptospirosis among medical and veterinary professionals, scientists, health planners, policy makers, and the general public in different parts of the world; to organize an international scientific meeting; to facilitate communication among people with an interest in leptospirosis; to provide up-to-date epidemiological information on leptospirosis to international and national health authorities as requested; and to provide or support internationally available services, as appropriate, that will assist the diagnosis of leptospirosis, research into leptospirosis, or the control or treatment of leptospirosis.

In line with one of its goals, The ILS held its 9th ILS Scientific Meeting on 7-10 October 2015 in Semarang. Dr. Muhammad Hussein Gasem, one of the ILS executive members and also a member of the INA-RESPOND Steering Committee, became the Chairman of the meeting. It is hoped that this scientific meeting would be beneficial for all colleagues, and the participants would also get opportunity to develop networking and exchange knowledge with colleagues from different background around the world. The theme of the 9th ILS Scientific Meeting is "Current update on Molecular, Biomedical, Clinical, Public Health and Veterinary aspects of Leptospirosis". More than 500 participants from various backgrounds such as medical and veterinary scientist, clinicians, public health expert, immunologist, molecular-biologist, microbiologist, and people working in related fields attended this meeting to share and present their tremendous work or research. Aside from Indonesia, participants came from Argentina, Australia, Bangladesh, Brazil, China, Chile,

Dr. Dewi Lokida (left) and Dr. Armaji Kamaludi at the International Scientific Society (ILS) Meeting in Semarang (October 2015)

France, India, Iran, Japan, Malaysia, Mexico, Netherlands, New Zealand, Saint Kitts, Sri Lanka, Switzerland, Thailand, United

Continued

Kingdom, and United States.
The main topics of the meeting were issues related to the recent studies on leptospirosis from epidemiology, host, pathogen, and disease. Here are the topics of the meeting:

1. "One Health": Ecology & Beyond
2. Genomics & Molecular Approaches to Understanding Virulence
3. Epidemiology of Veterinary Leptospirosis
4. Immunology and Vaccines
5. Clinical Leptospirosis
6. Host-Pathogen Interactions in Leptospirosis
7. Epidemiology of Human Leptospirosis

To broaden their recent knowledge on leptospirosis, dr Dewi Lokida, Sp.PK (Head of Clinical Laboratory, INA-RESPOND Secretariat), dr Armaji Kamaludi (NIHRD researcher), Ms. Deni Pepy (Lab Technician, INA-RESPOND Secretariat), and dr. Nurhayati (Clinical Research Site Specialist, INA-RESPOND Secretariat) were given the opportunity to attend the meeting.

One of INA-RESPOND collaborators, dr Dewi Lokida, Sp.PK, and her associate, dr Arif Budiman, Sp.A (Tangerang District Hospital), shared their amazing experiences on a case report of a 12-year-old boy from Tangerang District Hospital, titled "Weil's Disease With Multiple Organ Failure In A Child Living in Dengue Endemic Area", in the Clinical Leptospirosis session.

All clinical, radiology, and laboratory data were gathered and analyzed from Day 1 of hospitalization until discharge, and follow-up visits (Day 28 and Day 56). The blood specimens were stored and retrospectively tested to confirm Leptospirosis. A lesson learned from this case report is the importance of considering leptospirosis as the cause of acute febrile illness in children, besides the common etiologies such as dengue or typhoid fever. Manuscript for this case report is being prepared.

From left to right: Dr. Armaji Kamaludi, Dr. Arif Budiman, Dr. M.H. Gasem, and Dr. Dewi Lokida at the International Scientific Society (ILS) Meeting in Semarang (October 2015)

Knowing what have been presented during the meeting, it is hoped that we can support Principal Investigators and INA-RESPOND researchers by sharing this recent information and development on Leptospirosis.

Reported by dr. Dewi Lokida, Ms. Deni Pepy, dr. Nurhayati, dr. Armaji Kamaludi

LeptoFacts

What is leptospirosis?
Leptospirosis is an infectious disease caused by spirochete bacteria belonging to the genus Leptospira. Twenty different species of Leptospira have been described, some of which cause infections in humans.

What are the signs and symptoms of leptospirosis?
The clinical criteria for diagnosis of leptospirosis provided by the CDC include fever, headache, and myalgia, and less frequently by conjunctival suffusion, meningitis, rash, jaundice, or renal insufficiency. Symptoms may be biphasic.

When should a test be performed to diagnose leptospirosis?
Diagnostic testing should be requested for patients in whom there is a high index of suspicion for leptospirosis, based either on signs and symptoms, or on occupational, recreational or vocational exposure to animals or environments contaminated with animal urine.

Can leptospirosis be cured?
Mild leptospirosis typically resolves spontaneously without specific treatment. More severe cases may require treatment with tetracycline or penicillin. In man, symptoms may persist even after the infection is gone. Animals (buffalos, dogs, rats, goats, etc.) may be reservoir hosts and shed bacteria for longer periods of time.

Source: www.leptosociety.org

Profile:
INA-RESPOND Network's Head of Clinical Laboratory

Dr. Dewi Lokida was born in Jakarta in 1963. She graduated from Universitas Padjadjaran, Bandung in 1989 and took her specialty in Clinical Pathology, also in the same university. Besides her formal position as the Head of Clinical Pathology Laboratory at Tangerang Hospital, she is also actively involved in our network as the Head of Clinical Laboratory.

Last week we had the chance to ask her some questions about her and INA-RESPOND. Here they are:

What are your areas of interest?
Actually I have a lot of interests in the medical field, including becoming a clinician. After careful considerations, I finally decided to become a clinical pathologist, and thank God I really love this field. Besides infectious diseases, I am also interested in hematology.

What made you join the INA-RESPOND network?
I believe that life is governed by Alllah SWT. When I was in my residency, I had the opportunity to participate in various studies such as dengue and influenza. Both were done jointly with NAMRU#2. My involvement became more intense with the rampant cases of avian flu in Tangerang, which still needs to be investigated.
Later on, I was trusted to become the Principal Investigator of the Severe Acute Respiratory Infection study collaborating with the late Dr. Endang Sedyaningsih.
Because INA-RESPOND was originally proposed by her and I had the support from the former Director of Tangerang Hospital at that time, who was actually Dr. Endang's husband, I happily accepted to be part of the INA-RESPOND network.

When did you join INA-RESPOND? What is your position In the INA-RESPOND network?

I had already participated in the first meetings before the name INA-RESPOND was decided in 2011. Currently, I am responsible for the laboratory areas, both related to the diagnosis of pathogens and other tests such as hematology and chemistry.

Please name some of the many contributions you have given for the success of INA-RESPOND.
I think the success of the INA-RESPOND is a team success. It is the success of all its stakeholders (INA-RESPOND's Governing Board, Steering Committee, Secretariat, National Institute of Health Research and Development, Sites, and its sponsor, the NIH.) Everyone has given their own contribution to the network's success, and I am really proud to be part of this success.

How do Indonesian researchers benefit from INA-RESPOND?
I have first-hand experience of how difficult it is to find funding for a study and how to effectively manage this fund when do we get it. With the establishment of INA-RESPOND, Indonesian researchers who have interesting ideas for needed studies will have an easier time looking for fundings. This is a huge benefit and a great opportunity for the medical universities and hospitals in Indonesia to carry out good research and improve both their capacities, both human and laboratory resources.

> "We are the stakeholders of INA-RESPOND, and it is our duty to maintain and develop the network to become an invaluable national asset to help resolve Indonesia's health issues as well as the world's."
>
> Dr. Dewi Lokida, Sp.PK
> Head of Clinical Pathology Laboratory, Tangerang Hospital, Tangerang, Indonesia

Dr. Dewi Lokida, Sp.PK
Dr. Herman Kosasih
Mr. Dedy Hidayat S.

Latest News:
A Glance of Research Progress in the World

Breath Specimens

We are all familiar with collecting blood or other biological specimens such as swab, sputum, urine, or faeces to detect the pathogens causing infections. But, what's about breath? Here, we will describe two studies that used breath as the specimens:

1. An article entitle "A Breath Fungal Secondary Metabolite Signature to Diagnose Invasive Aspergillosis," by Sophia Koo, et al (Clin Infect Dis. (2014) 59(12): 1733-1740), just selected as the most outstanding clinical study published in this journal during 2014, describes the benefits of using breath to diagnose one of the invasive fungal pneumonia (IVP), invasive aspergillosis (IA).

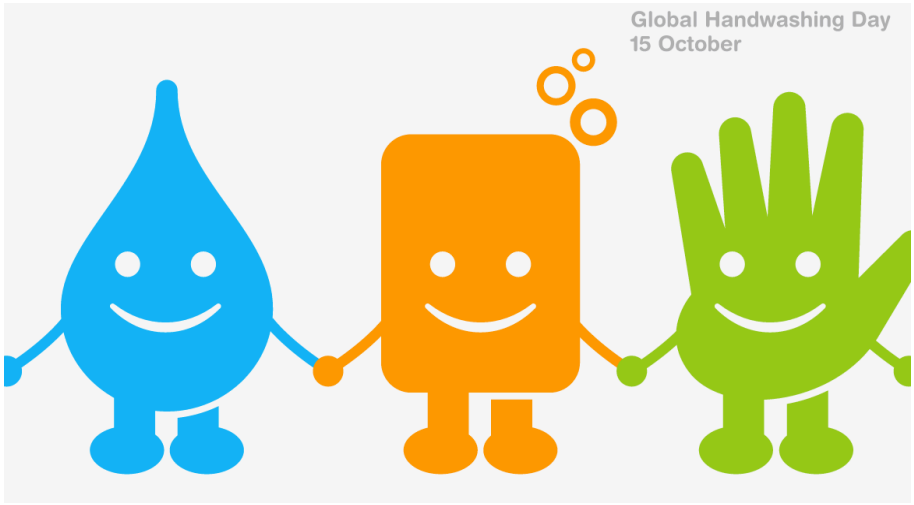
First, they found volatile metabolite profile of Aspergillus fumigatus, the most common cause of invasive aspergillosis, in vitro. They then collected breath samples from patients with IVP, who later were categorized into 34 IA cases and 30 non IA cases, based on the definitions by the European Organization for Research and Treatment of Cancer/Mycoses Study Group. The detection of volatile metabolites of Aspergillus fumigatus (α-trans-bergamotene, β-trans-bergamotene, a β-vatirenene–like sesquiterpene, or trans-geranylacetone) identified IA patients with 94% sensitivity (95% CI: 81%–98%) and 93% specificity (95% CI, 79%–98%). These results provide proof-of concept that direct detection of exogenous fungal metabolites in breath can be used as a novel, noninvasive, pathogen-specific approach to identifying the precise microbial cause of pneumonia, potentially allowing more precise targeting of antifungal therapy.

2. The current methods to diagnose tuberculosis (TB) patients rely on physicians' clinical suspicion and diagnostic procedures that can be slow, expensive, and require further expertise. Therefore, a diagnostic test that is low cost, non-invasive, easy to use at the bedside; and gives rapid accurate results is a public health priority. Amandip Sahota from the University Hospitals of Leicester, UK reported that a novel technique analyzing gaseous volatile organic compounds from samples of exhaled breath accurately detected tuberculosis among infected patients.

He and his colleagues assessed whether field asymmetric ion mobility spectrometry (FAIMS), a mobile device that can rapidly identify and separate complex odors, has the ability to detect TB in real time. They collected breath samples from 25 patients with confirmed TB. The patients provided the samples by exhaling into a 3L tedlar bag before or shortly after they started treatment. A FAIMS unit measured the ionic mobility of gaseous volatile organic compounds within the patients' samples. The results were processed within 2 hours using a previously developed analysis pipeline for FAIMS and were compared with control samples from 19 healthy participants. They reported that the gas analysis was more than 90% accurate in diagnosing pulmonary and extra-pulmonary TB, with a sensitivity of 93% and specificity of 94% (area under the curve = 0.96; 95% CI, 0.93-1). As this study was conducted in a small group, a larger study should be conducted. However, these results show great promise and will form the basis for future research into breath analysis for TB detection.

Reference:

Sahota A, et al. Breath Analysis to Diagnose Pulmonary and Extra-pulmonary Tuberculosis Using Ion Mobility Spectrometry. Presented at: Interscience Conference on Antimicrobial Agents and Chemotherapy; Sept. 17-21, 2015; San Diego.



Clean Hands Protect Against Infection

By Novitasari

Did you know that hand washing reduces the spread of harmful germs that are transmitted through food? Each year, there are 1.7 billion cases of childhood diarrhea. Diarrhea may be a minor inconvenience in some places, but in many countries it kills. But there is good news! The simple act of hand washing with soap can reduce the risk of diarrheal disease by up to 47 percent. Hand washing with soap before preparing and eating a meal is a great way to help keep yourself and others healthy and safe!

With this article, we are encouraging people to wash their hands properly and keep them clean. Many literatures have reviewed on evidence of hand hygiene to reduce transmission and infection. Types of diseases that can be reduced by good hand washing include diseases spread through fecal-oral transmission (salmonellosis, shigellosis, hepatitis A, giardiasis, enterovirus, amebiasis, and campylobacteriosis), indirect contact with respiratory secretions (influenza, Streptococcus, Respiratory Syncytial Virus, and the common cold), urine, saliva, or other moist body substances (Cytomegalovirus, typhoid, staphylococcus organism, and Epstein-Barr virus).

How do I wash my hands properly?

Washing hands with soap and water is the best way to reduce the number of germs on our hands in most situations[1]. This helps prevent infections because:

- People frequently touch their eyes, nose, and mouth without even realizing it. Germs can get into the body through the eyes, nose, and mouth and make us sick.
- Germs from unwashed hands can get into foods and drinks while people are preparing or consuming them. Under certain conditions, germs can multiply in some types of foods or drinks and make people sick.

(continued)

TAKE ACTION:

PROVIDERS

Provide hand soap in public wash/rest areas, and create creative hand washing campaign to socialize hand washing.

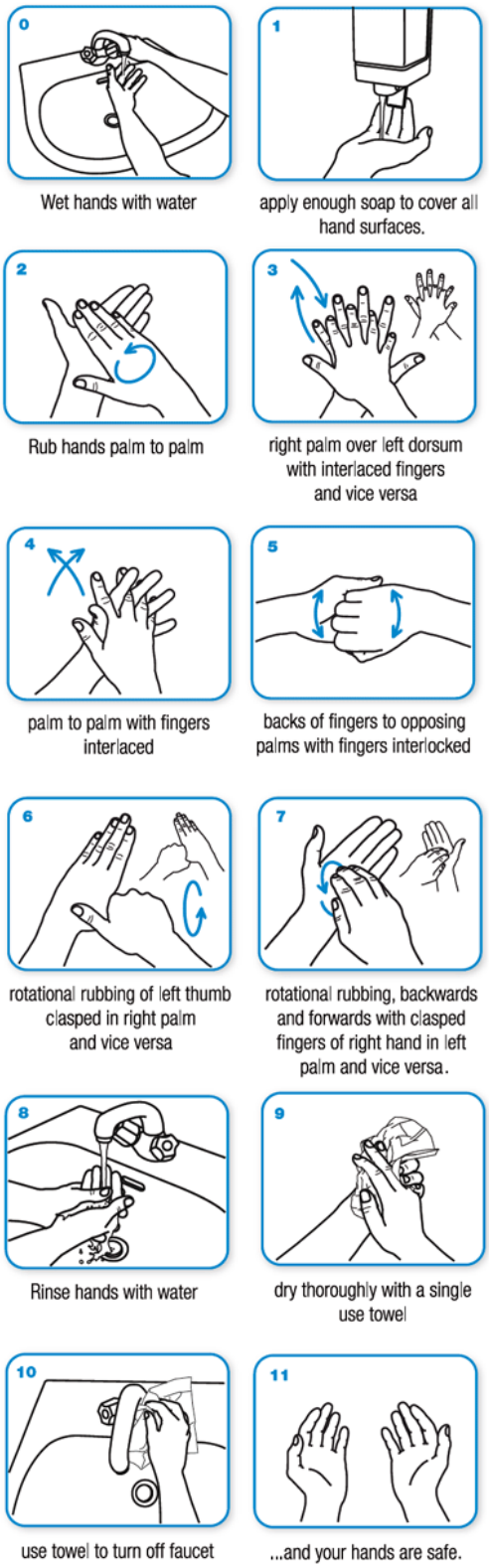
FAMILIES

Teach your children to wash their hands with soap, and make it a habit out of it.

EVERYONE

Spread the importance of washing your hands with soap. Play active role in reducing the number of infectious diseases.

Infograph: How to correctly wash your hands using soap.



Use alcohol-based hand sanitizer that contains **at least 60% alcohol** if soap and water are not available

- Germs from unwashed hands can be transferred to other objects, like handrails, tabletops, or toys, and then transferred to another person's hands.
- Removing germs through hand washing therefore helps prevent diarrhea and respiratory infections and may even help prevent skin and eye infections.

In situation where soap and water are not available (for example when we are in the car and we want to eat), we can use an alcohol-based hand sanitizer that contains at least 60% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do **not** eliminate all types of germs. Hand sanitizers are not as effective when hands are visibly dirty or greasy[1].

A preliminary survey in France was conducted to observe the use of alcohol-based hand gel sanitizer to reduce the number of travellers experiencing diarrhea and gastrointestinal upset based on recommendation by the CDC, but its effectiveness has not been assessed.

200 returning travellers participated in the survey, and 32.5% declared they used alcohol-based hand sanitizer during travel. Travellers who used hand sanitizer reported experiencing less diarrhea and vomiting than those who did not (17% vs. 30%, OR Z 0.47; 95% CI [0.21e0.97], p Z 0.04). A total of 257 travellers consulting for pre-travel advice were included. The majority of travellers knew that hand sanitizer might be used for hand hygiene and had already used hand sanitizer; 72% planned to bring hand sanitizer during their next travel[2].

It is critical to educate people on how to properly wash their hands. Teaching people about hand washing helps them and their communities to stay healthy. Hand washing education in the community[1]:

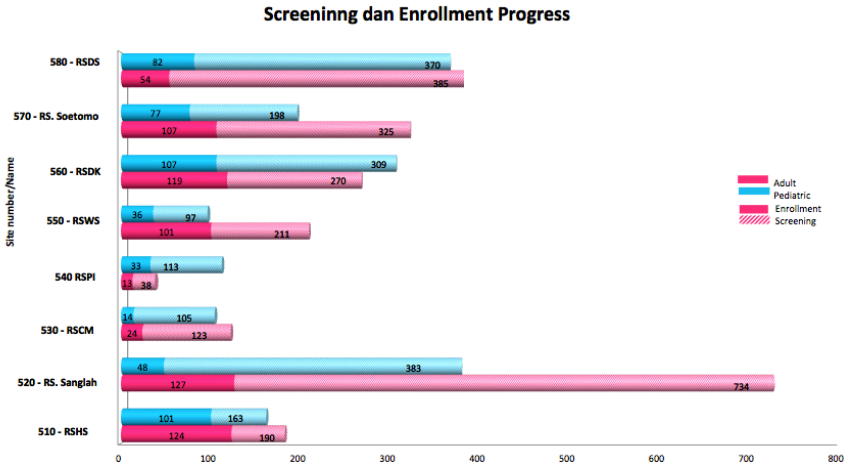
- Reduces the number of people who get sick with diarrhea by 31%
- Reduces diarrheal illness in people with weakened immune systems by 58%
- Reduces respiratory illnesses, like colds, in the general population by 16-21%

Source:

1. http://www.cdc.gov/handwashing/index.html
2. *Delphine Henriey, Jean Delmont, Philippe Gautret. "Does the use of alcohol-based hand gel sanitizer reduce travellers' diarrhea and gastrointestinal upset?: A preliminary survey". Travel Medicine and Infectious Disease (2014) 12, 494-498*

INA-RESPOND Study Updates

By dr. Anandika Pawitri,
dr. Nurhayati,
Ms. Novitasari



*510 – RSUP dr Hasan Sadikin
520 – RSUP Sanglah
530 – RSUPN dr Cipto Mangunkusumo
540 – RSPI Prof Dr Sulianti Saroso
550 – RSUP dr Wahidin Sudirohusodo
560 – RSUP dr Kariadi
570 – RSUD dr Soetomo
580 – RSUP dr Sardjito

AFiRE Study (INA101) Updates

Up to 19 October, the 8 AFIRE sites had screened 3,987 patients and enrolled 1,160 subjects (664 adults and 496 children). See chart for detailed information on the enrollment.

The top recruiter is currently held by site site 560 (RSUP. Dr. Kariadi, Semarang) with 226 enrolled subjects and followed by site 510 (RSUP. Dr. Hasan Sadikin, Bandung) with 225 enrolled subjects.

Detailed screening and enrollment progress is available in portal folder: Studies\INA101\Screening progress.pdf or go to the following link: https://ina-respond.s-3.com/EdmFile/getfile/797233

For further information about this study please go to: http://www.ina-respond.net/afire-study/

Sepsis Study (SEA050) Updates

RS. Universitas Hasanuddin, the satellite site for RS. Dr. Wahidin Sudirohusodo, began screening on 21 September 2015. We are hoping that RS. Universitas Hasanuddin can help boost the screening and enrollment number for site 42 before the end of the screening and enrollment period, in December 2015.

Screening and Enrollment Progress up to 19 October 2015

	Site 41 – RS dr. Cipto Mangunkusumo	*Site 42 – RS dr. Wahidin Sudirohusodo & RS Universitas Hasanuddin*	*Site 43 – RS Sardjito*
Number of Screened Patients	Adult : 80 Pediatric : 48 Total : 128	Adult : 57 Pediatric : 26 Total : 83	Adult : 131 Pediatric : 95 Total : 226
Number of Enrolled Patients	Adult : 11 Pediatric : 3 Total : 14	Adult : 19 Pediatric : 3 Total : 22	Adult : 19 Pediatric : 5 Total : 24
Enrollment Expectation	Adult : 15 Pediatric : 15	Adult : 25 Pediatric : 25	Adult : 20 Pediatric : 20
Number of days after enrollment	Day 74 (activation date: 6 August 2015)	Day 235 (activation date: 26 February 2015)	Day 179 (activation date: 23 April 2015)

Newsletter

The INA-RESPOND newsletter has reached its 25th edition. The newsletter that started as a means to introduce the network to the public has become one of the main medias to bridge the communication among its network members. It is truly exciting to see how much we have accomplished in the last 2 years. Nevertheless, this is no time for us to be complacent. We need to keep improving our good teamwork and strive for the best, coming up with creative and interesting ideas for our newsletter.

Getting requests and inputs from many of our network members and collaborators, INA-RESPOND Secretariat is preparing a new section in the newsletter. We are currently trying to put this new idea into practice. Hopefully, it will be ready in the not-so-distant future. One thing for sure, we are really excited about this. We hope you are too! ☺

INA-RESPOND Newsletter

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Art & Language	: Dedy Hidayat S, S.Kom
Columnists	: dr. Dewi Lokida, dr. Anandika Pawitri, dr. Nurhayati, Ms. Novitasari
Thanks to	: INA-RESPOND Network and Partners
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We would like to hear from you. Go ahead and send us your scientific articles, team profile, or feedback about the newsletter to INA.Secretariat@s-3.com