

INA-RESPOND

INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE



NEWSLETTER

December 2018

How to **Write** and **Publish**
Scientific Paper in
International Journals

TRIPOD and INA-PROACTIVE
Studies' Updates

Comic Corner:
The Importance of Critical
Appraisal

Health and Sport:
Boost Your Daily Steps With
Activity Tracker

Site Profile:
RSUP. Dr. Sardjito,
Yogyakarta

NATIONAL INSTITUTE OF HEALTH RESEARCH AND DEVELOPMENT
MINISTRY OF HEALTH REPUBLIC OF INDONESIA

2018



Network Steering Committee Meeting

3—4 December 2018

@Double Tree Hotel by Hilton, Jakarta

INA-RESPOND newsletter

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content

December 2018 Edition | issue #63

4

Study Updates

6

Site Profile

9

Reports

17

Science & Health

19

Health & Sport

FEATURES

Comic
Corner
22

*the
Comic
Corner*

INA-RESPOND Newsletter

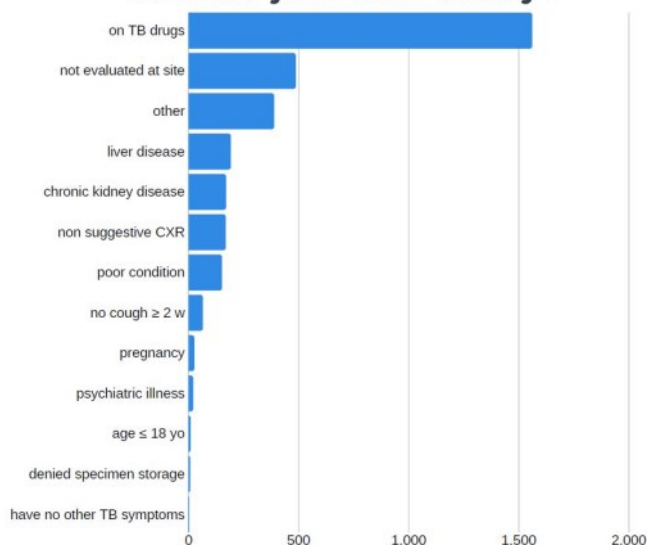
TRIPOD & INA-PROACTIVE Study Updates

By: ANANDIKA PAWITRI, EKA WINDARI R., LOIS E. BANG, MARIA INTAN JOSI, M. IKHSAN JUFRI, VENTY MULIANA SARI

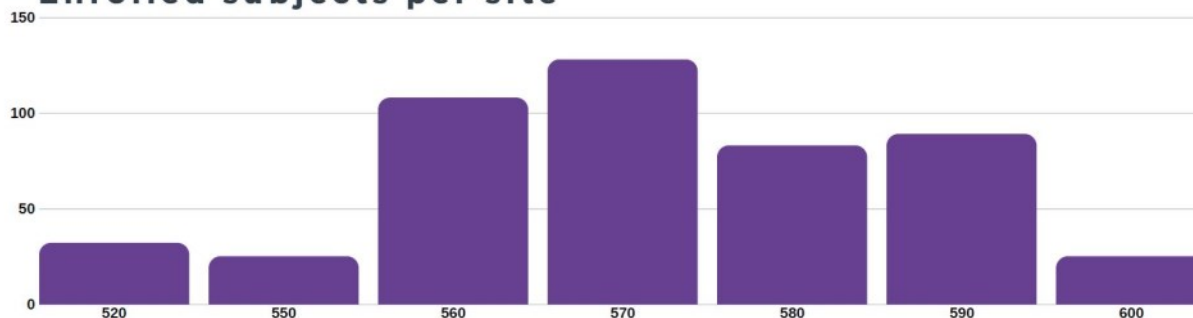
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Why prescreened patients cannot join our study?



Enrolled subjects per site



TRIPOD Manuscript

The TRIPOD study team members, together with NIAID, have started discussion about writing a manuscript, and an outline is currently being drafted. The following are several planned manuscripts : a) focus on the baseline findings; b) treatment outcome and the related affected factors; c) related factors of TB and DM comorbidity. The team will start working on study data

identifications, i.e. previous TB treatment, etc. to prepare for the first manuscript.

Research Assistant on TRIPOD Study

With screening and enrolment activities ending on 30 November 2018, INA-RESPOND has decided that Research Assistants working on TRIPOD study will be transferred to INA-PROACTIVE study at each respective site.

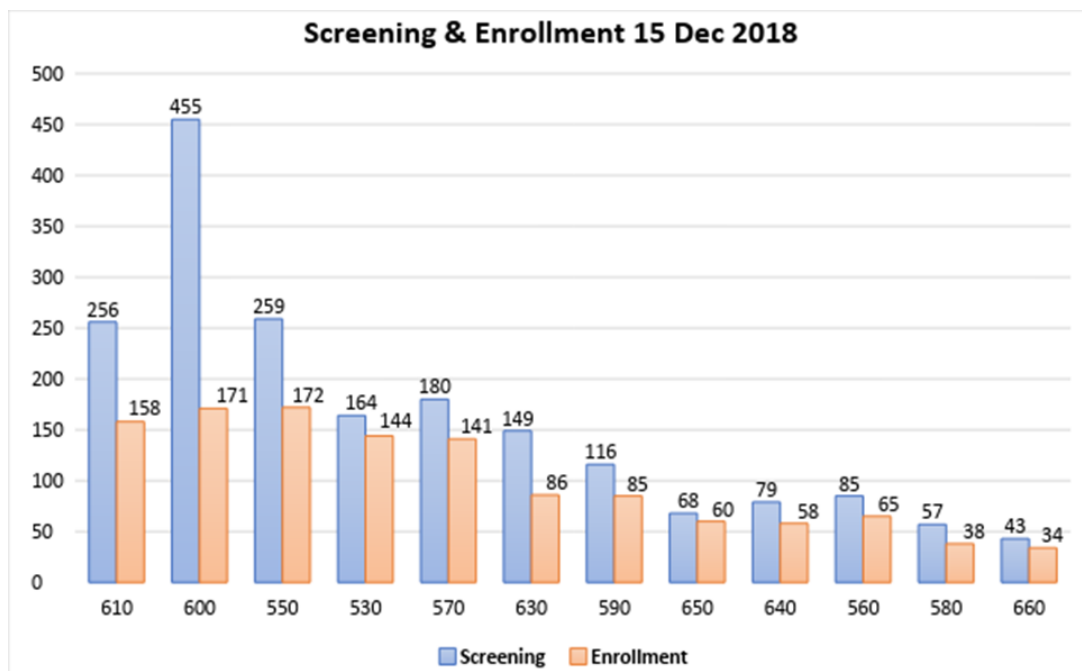
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By 15 Dec 2018, all 12 sites, as shown in the figure on the right, had enrolled 1,212 subjects consisting of 57 pediatrics and 1,155 adults. Sites enrolled 63.4% of screened patients (1,911 screened patients).

Enrollment failure rate was 36.57% from total screening due to the reasons shown in the table below.

A second Site Monitoring Visit was conducted to site 530/Cipto Mangunkusumo Hospital on 17-20 Dec 2018, and another second Site Monitoring Visit to site 570/Soetomo Hospital was performed on 19-21 December 2018.

There are some progressions in new sites preparation. Site Preparation Visit (SPV) was conducted at site 540/Sulianti Saroso Hospital on 11-13 Dec 2018, which will be continued to Site Initiation Visit (SIV).



Hopefully, this site will be the next active recruiting site for INA014 study. SPV was also planned to be conducted on January 2019 for site 520/RSUP Sanglah, site 510/RSUP Dr. Hasan Sadikin, and 670/ RSUD Zainoel Abidin.

In addition, we are still working on the assessment of new sites. By 12 December 2018, INA-RESPOND Secretariat had conducted a Site Assessment Visit to RSUD dr. Soedarso, Pontianak, Kalimantan. Other hospitals that are being approached are Abepura Hospital in Papua and TC Hiller Hospital in Maumere, East Timor.

Reason	610	600	550	570	530	630	590	650	640	560	580	660	Total
Refuse to consent	2	-	2	4	3	-	5	-	-	2	-	-	18
Unwilling to comply with the study procedures	1	24	1	3	6	-	-	2	-	11	3	-	51
Plans to move away	1	8	5	-	6	2	3	-	2	3	-	-	30
Others:	94	252	79	13	24	61	23	6	19	4	16	9	600
A. No show	55	248	22	4	15	37	13	-	3	1	2	2	402
B. Busy (in a hurry)	18	4	26	4	8	5	3	5	15	2	11	7	108
C. Not cooperative	-	-	1	-	-	-	-	-	-	-	-	-	1
D. Has been enrolled	17	-	24	5	-	12	7	1	1	1	-	-	68
E. Unwell	-	-	2	-	-	-	-	-	-	-	-	-	2
F. No referral letter from others health facilities	-	-	-	-	1	-	-	-	-	-	-	-	1
G. Equipment trouble	-	-	-	-	-	6	-	-	-	-	-	-	6
H. Participated in other CT	-	-	-	-	-	-	-	-	-	-	3	-	3
I. Hospitalized	-	-	2	-	-	-	-	-	-	-	-	-	2
m. Suspect HIV patient	4	-	2	-	-	1	-	-	-	-	-	-	7

INA-RESPOND *Newsletter*

Site Profile: RSUP. Dr. Sardjito, Yogyakarta

By: YUSRINA ADANI



1st Site Monitoring Visit on 23rd-24th October 2018

Yogyakarta is known as a lovely city, and it has a reputable hospital named Dr. Sardjito General Hospital which is located at the heart of the city, next to the Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada (FKKMK UGM). INA-PROACTIVE, one of INA-RESPOND studies focusing on HIV cases, takes place at this hospital (Site 580). The study started in September 2018 after receiving ethical clearance from the faculty's ethics committee.

Site 580's INA-PROACTIVE team members consist of a pediatrician, an internist, a clinical pathologist, a clinical microbiology doctor, lab technicians (LT), and re-

search assistants (RA). Screening and enrollment process is conducted at Edelweis clinic (adult HIV clinic) and the Division of Tropical Disease and Tropical Pediatrics clinic (children HIV clinic). Blood samples are taken at the clinics. They are then transferred to the Clinical Laboratory of Dr. Sardjito Hospital and to the Microbiology Laboratory of FKKMK UGM for blood specimen processing and storage.

The following is a list of people who contribute to the INA-PROACTIVE study:



dr. Abu Tholib Aman, MSc,
PhD, Sp.MK (K)

Steering Committee Member/ FKKMK UGM

dr. Tholib is assigned not only as the Network Steering Committee member of INA-RESPOND Site 580 but also as the Chair of Clinical Microbiology Residency Training at FKKMK UGM. He is a meticulous person and always shows great interests in research. He has been contributing actively to INA-RESPOND since the network's first study in 2010. A page will not be enough to describe his support!



Dr. dr. Ida Safitri Laksanawati,
Sp.A(K)

Principal Investigator/RSUP Dr Sardjito

Dr. Ida obtained a doctoral degree from UGM for her research in infectious diseases on 14 March 2018. She is well-known as a charismatic and compassionate person. As a pediatrician who focuses on tropical infections, a medical practitioner, a teacher, and a researcher, her schedule is always packed. However, she always makes time to visit RAs at the INA-RESPOND office for some discussions. What a responsible PI!



dr. Yanri Wijayanti Subronto,
PhD., Sp.PD-KPTI

Co-Principal Investigator/RSUP Dr. Sardjito

Dr. Yanri has immersed herself in HIV-related studies for many years and has received many grants for many projects. She works as an internist and is acknowledged for her hard-working and practical personality. She is willing to spare her time to discuss important matters related to the study and to sign CRFs. Her inputs and advice are truly valuable.

Co-Principal Investigator/ RSUP Dr. Sardjito

Dr Umi is a kind-hearted woman. As a clinical pathology specialist, she is generous to share her knowledge not only to the team but also to her students. She has a special interest in infectious disease research. Therefore, her expertise in this study gives a big contribution, especially to laboratory matters.



Dr. dr. Umi Solekhah Intansari,
M.Kes., Sp.PK (K)

Co-Principal Investigator/ FKKMK UGM

Dr. Hera has been involved in many other studies, especially tropical infections. She gives lectures on microbiology at UGM. She proves to be a reliable and caring supervisor for INA-PROACTIVE because she puts attention to details in every meeting including weekly teleconference. She is also enthusiastic to review and sign every lab result form.



Dr. dr. Hera Nirwati, M.Kes.,
Sp.MK

Research Assistant/FKKMK UGM

Dr. Yusrina is the first research assistant of INA-PROACTIVE who can work well under pressure and is able to communicate her ideas clearly and effectively. She received her Master's degree in clinical research program at University College London last year. She is a cheerful and an outgoing person who likes to give suggestions on where to eat (some say, good food equals productive work!).



dr. Yusrina Adani, MSc



dr. Nenes Prastiwi

Research Assistant/FKKMK UGM

Dr. Nenes was a research assistant in PEER-PePPes study. Since the INA-PROACTIVE study needed more than one RA, she was transferred to INA-PROACTIVE to be the second RA. She also has an interest in clinical research. Not only is she friendly, she is also an attentive person and is always the first person to come to the office!

Lab Technician/RSUP Dr. Sardjito

Ms. Siti is a skilled lab technician from the Clinical Laboratory of Dr. Sardjito Hospital. Because the hospital is always full of patients, she needs to balance her work between patient care and research. She is a calm and hard-working woman. CD4 testing and blood specimen processing are her main responsibilities in INA-PROACTIVE.



Siti Binzanah



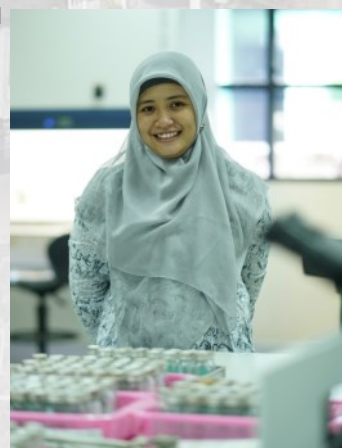
dr. Yanantri Binga Ramsif

Research Assistant/FKKMK UGM

dr. Yanantri Binga Ramsif, familiarly known as dr. Aya, is a PEER-PePPes study research assistant who also helps in INA-PROACTIVE. She is nice and humble, and she hopes that she can do her best for both studies. This is not the first time she joins an INA-RESPOND study. Before PEER-PePPes and INA-PROACTIVE, dr. Aya was involved in TRIPOD study while the initial RA was taking a maternity leave for 3 months.

Lab Technician/FKKMK UGM

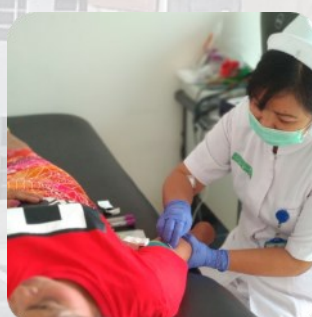
Ms. Linda is an experienced lab technician from the Microbiology Laboratory of FKKMK UGM. She is currently involved in both INA-PROACTIVE and TRIPOD studies. She demonstrates decent work in HIV/Syphilis rapid test, viral load test, and keeping the specimens safe in the revco. Despite her busy schedule, she looks happy every day.



Linda Oktabrina



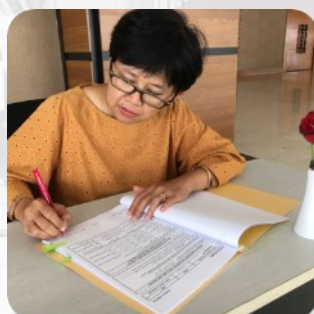
RA interviews a subject after obtaining a written consent



Blood withdrawal by a nurse at the clinic



Blood processing by LT 1 at Dr Sardjito Hospital



PI/CoPI signs CRF after all procedures are completed



Blood processing by LT 2 at Dr Sardjito Hospital



INA-RESPOND Newsletter

“How to Write and Publish Scientific Paper in International Journals” Workshop

By: ADHELLA MENUR NAYSILLA



REPORT

INA-RESPOND Site 560 has been collaborating with the Faculty of Medicine, Diponegoro University, and Dr. Kariadi General Hospital, Semarang for almost 7 years. The results of this collaboration are the 4 well-run studies of INA-RESPOND: AFIRE, TRIPOD, PEER PePPes, and INA PROACTIVE. To appreciate this collaboration and to support the vision of Diponegoro University which is to become a research university, Site 560 organized a workshop entitled “How to write and publish scientific paper in international journals”. The event was exclusively purposed for attending physicians and lecturers who came from four departments that are fully involved in INA-RESPOND studies: Internal Medicine Department, Pediatric Medicine Department, Clinical Pathology Department, and Clinical Microbiology Department. The participants had to submit their manuscript draft to the committee for the event’s requirement.

The workshop was held at Laras Asri Resort and Spa, Salatiga on 23-24 November 2018. The event began with opening remarks from Prof. dr. Muhammad Hussein Gasem, Sp.PD, K-PTI, Ph.D as a Network Steering Committee member of INA-RESPOND with one powerful message to encourage the clinicians to write and publish scientific papers in high quality journal. Dr. Endang Sri Lestari, Ph.D, as the chairman of the organizing committee, gave a warm welcome speech. She also shared her experience as a Co-PI in AFIRE study, which was the first study of INA-RESPOND.

The first session of the workshop was a presentation from Prof. Dr. rer. nat. Heru Susanto about how to choose a suitable journal for publication. Prof. Dr. Heru is a young productive professor with 62 international publications that focus in membrane technology research. He is the Head of *Lembaga Penelitian dan*

Pengabdian Kepada Masyarakat (LPPM), Diponegoro University. He explained the peer review process and gave a reminder that every publication starts with a good quality paper. A good quality paper can be achieved with a habit of reading reference journals at least 7 hours every week. The recommendations for selecting journal to publish are by choosing reputable journal publisher, start with the journal with low impact factor, choosing at least SCOPUS indexed journals, and avoiding predatory journal.

Prof. dr. Sultana M.H. Faradz, Ph.D, as the Head of MSc program on genetic counseling and CEBIOR (Center for Biomedical Research, Faculty of Medicine, Diponegoro University) presented a comprehensive presentation about well-written paper. She explained the whole bodies of a paper clearly and gave the participants valuable tips. She reminded the participants that being an author is not a gift, and that an author has to give contributions. Therefore, researchers have the responsibility to ensure that their publications are honest, clear, accurate, complete, and balanced; and should avoid misleading, selective, or ambiguous reporting.

The next interesting presentation was about how to present clinical research using tables and figures by dr. Rahajeng N. Tunjungputri, M.Si.Med, Ph.D., who is a young lecturer in Faculty of Medicine, Diponegoro University and the first author of eight international journals. She explained that the result section should reflect what was found in the research. Texts, tables, and graphics must complement each other in the result section. She also introduced an applicable software to help authors present their data in tables and graphics.

After a delightful dinner and break, the participants were divided into five groups to discuss their manuscript draft with the facilitators. The facilitators were lecturers from the Faculty of Medicine, Diponegoro University with brilliant experiences in authorship (dr. Endang Sri Lestari, Ph.D; dr. Rahajeng N. Tunjungputri, M.Si.Med, Ph.D; Dr. dr. Tri Indah Winarni, M.Si.Med, PA; dr. Endang Mahati, M.Sc, Ph.D, and dr. Nani Maharani, M.Si.Med, PhD).

Prof. Hussein Gasem gave an important presentation about ethical element in research scope before the discussion started. He warned the participants about the dangers of plagiarism and even self-plagiarism. The best method to avoid it is by simply being honest. Another way to avoid plagiarism is by using your own work as often as possible and quote and/or cite your sources properly. The discussion went intense and ended at 11.00 PM. The participants and facilitators were all excited until the end of the session.

The last day of workshop was about finishing and wrapping the manuscript draft. Prof. Hussein, Prof. Sultana, dr. Rahajeng, and dr. Endang Sri Lestari shared their experiences about how to respond to a rebuttal letter from reviewers. They encouraged the participants to submit their manuscript and not to be afraid of rejections. At the end of the workshop, the participants gave their feedback on the workshop. They shared their gratitude to committees and looked forward to the next scientific workshops of INA-RESPOND.

Site 560 thank INA-RESPOND for the endless support and experiences 😊

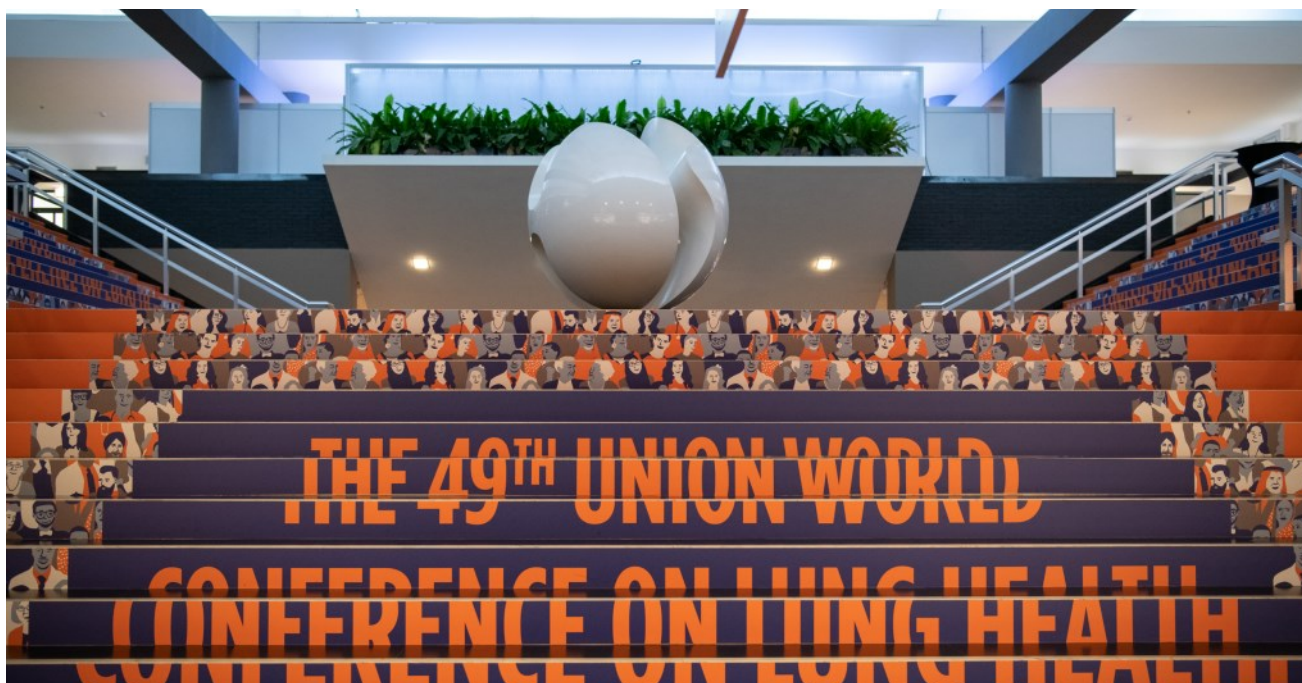




INA-RESPOND *Newsletter*

The 49th Union World Conference on Lung Health

BY: DR. NI LUH PUTU ARIASTUTI



REPORT

The 49th Union World Conference on Lung Health was held in The Hague, Netherlands on 24-27 October 2018. The Hague is a city located in the west of the Netherlands: it is the official seat of the Dutch Government and home to the Dutch Royal family. The Hague is also known worldwide as the International City of Peace and Justice. The conference was locally hosted by KNCV Tuberculosis Foundation and The city of The Hague. The Union World Conference on Lung Health is the world's largest gathering of clinicians and public health workers, health program managers, policymakers, researchers, and advocates working to end the suffer-

ing caused by lung disease, with a focus specifically on the challenges faced by low- and lower middle-income countries. It attracts thousands of delegates from more than 125 countries and brings recognized global experts and opinion formers from all over the world to take part in the 150 sessions offered by the four-day scientific program.

"Declaring Our Rights: Social and Political Solutions" was this year's theme. The theme mainly give focus on eliminating tuberculosis (TB) and achieving the health-related Sustainable Development Goals, which require a Coordinated Public Health Response driven by the human rights

of each individual. There were approximately 2,332 submitted abstracts from countries around the world: 183 abstracts were presented in oral presentation; 240 abstracts were presented in short oral presentation; and 652 abstracts were presented during the poster sessions.

This year's opening ceremony was special because it was attended by Her Imperial Highness Princess Aki-shino of Japan and Her Royal Highness Princess Margriet of the Netherlands. Opening the Union World Conference, Princess Margriet inspired those who attended the event through recollections of her own family's connection with TB. During

the inaugural ceremony, the delegates also heard a moving story from Ibnu Haykal, a young man from Indonesia who is a victim of impure asthma from second-hand smoking.

The main activities of the conference consisted of post graduate course, workshop, meetings, plenaries, sessions, oral and poster abstract presentations, and also community space. During the four-day conference, 904 presentations, 524 posters, and 308 astonishing sessions were delivered. The topics discussed varied from new diagnostic method, treatment, public health approach, and tobacco control to political commitment to tackle mainly tuberculosis and other lung health issues in children and adults.

In the bacterial and immunology subsection, diagnostics technique using non-invasive methods such as oral swab and stool swab to diagnose TB in children received a lot of attention during the conference. New host biomarkers technique to support diagnostic and treatment response monitoring was also discussed. Treatment and monitoring of drug-resistant TB were discussed from various points of views from clinicians, pharmacology, nurses and allied health professional, community health worker, and policy makers. The emphasis was patient-centered TB care provided by trained nurses and the use of digital technology such as cell phone apps to improve treatment adherence.

Another strong topic during the conference was about human rights-based approach to lung health which highlighted the collaboration needed to ensure the case finding and treatment access. The discussion also lingered in the topic of community engagement to reach and support people with tuberculosis so that no one is left behind. An

interesting discussion around one health approach was raised in the conference following the increasing finding of zoonotic tuberculosis cases.

Tobacco control initiative focused on discussions about the prevention of lung diseases. Delegates from various countries including Indonesia presented their success stories in controlling tobacco impact to lung health. Dr. Artawan, a delegate from Indonesia, presented his project about ensuring the compliance of smoke-free law in several areas in Indonesia.

The community space hosted a vibrant programme with more than 40 sessions and activities, including panel discussions, skill building workshops, networking, and participatory sessions where community activists, scientists, students, and civil society came together to discuss solutions to improve lung health.

On 25 October 2018, one INA-RESPOND research assistant, dr. Ni Luh Putu Ariastuti, did not only join

the conference as a delegate, but she also had the opportunity to present her abstract during the oral presentation session. Her abstract was titled "The association of diabetes status and pre-treatment bacillary load among Pulmonary TB patients in Indonesia". She presented data from the Tuberculosis Research of INA-RESPOND on Drug Resistance (TRIPOD) study. It was a great experience for her as a junior researcher to learn and feel the academic ambiance throughout the conference activities.

The closing ceremony marked the commitment of all delegates in tackling lung health worldwide, especially TB. At the very end, The Union announced that the next year's world conference will be held in Hyderabad, India, on 30 October - 2 November 2019. Hopefully, more delegates from INA-RESPOND can participate in the conference.



INA-RESPOND *Newsletter*

The 3rd INA-RESPOND International Symposium 2018

By: M. HELMI AZIZ, NURHAYATI, VENTY M. SARI



REPORT

The 1st Annual Scientific Meeting of Indonesian Society of Tropical and Infectious Disease in conjunction with the 3rd INA-RESPOND International Symposium and the 7th Annual Bandung Infectious Disease Symposium was held on 12-14 October 2018 at El Royale Hotel, Bandung, Indonesia. This event was successfully organized by the Indonesian Society of Tropical and Infectious Disease in collaboration with INA-RESPOND.

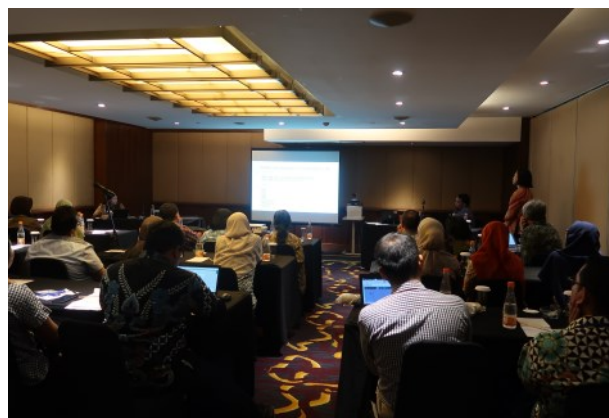
The conference theme was "Harnessing Innovative Strategies to Control and Manage Infectious Diseases". It was attended by participants from diverse backgrounds such as physicians, nurses, laboratory, pharmacy, public health officers, and researchers working in health care sector who are interested in infectious diseases. INA-RESPOND network sent 85 delegations

to attend this event as speakers, moderators, and participants. There were also posters and free oral presentation sessions during this event. The selected free oral presentations were then inserted in each specific session, side by side with presentations by the expert and invited speakers. INA-RESPOND contributed by sending 5 posters and was involved in two oral presentation sessions.

This 3-day event began on 12 October 2018 with seven workshop sessions which were divided into two parts: the morning session from 9 to 11 a.m. and the afternoon session from 2 to 4 p.m., except for the Antimicrobial and Antibiotics Stewardship Program workshop which was held full day. This workshop required minimum attendance hours to achieve additional certification, i.e. the Antimicrobial Resistance Control Pro-

gramme (ARCP) certification in addition to the IDI and HIS-FARI accreditation on conference certificates. During the workshop session, INA-RESPOND delivered three Workshops: "New Understanding of HIV Pathophysiology and its implication on Management"; "Diagnostic Approaches for Rickettsia Infection"; and "Database for Clinical Research". The first workshop was delivered via teleconference (TC) with HIV Experts from the National Institute of Health (NIH) of the United States who presented several interesting and challenging HIV cases. In this session, Ms. Chuen-Yen Lau, a medical officer from NIH who is also an HIV researcher, moderated presenters and participants to discuss the cases. The second Workshop about Rickettsia diagnosis was carried out by the INA-RESPOND reference lab team. During this session, they shared their experience of using several methods to diagnose Rickettsia infection within subjects of the first INA-RESPOND study, AFIRE (The Etiology of Acute Febrile Illness Requiring Hospitalization). It was opened by a presentation about the overview of Rickettsiosis in Indonesia by dr. Dewi Lokida, Sp.PK(K), the head of INA-RESPOND reference lab and was continued by a presentation about ELISA Assay, Immunofluorescence Assays (IFA), and molecular diagnostic for Rickettsia infection. The third INA-RESPOND Workshop, which was about "Database for Clinical Research" was no less exciting as well. This workshop was delivered by Michael Duvenhage, a senior database manager of the NIH, who is also the data manager of INA-RESPOND. He started the presentation by explaining the overview of database management in clinical research, continued by showing the important specifications and steps in database development and closed by a Hands-on Training using one of the online database systems called REDcap (Research Electronic Data Capture). Plenty of participants asked some questions and made the training ambience livelier.

The symposiums were held on the second and third days of the event. INA-RESPOND was involved in nine parallel symposiums as well as plenary lectures and meeting-the-expert session. We delivered our findings from the AFIRE study in one plenary symposium entitled "New Update on Etiological Spectrum of Acute Fever and its Clinical Implication: Result from AFIRE Study". There was also an INA-RESPOND symposium with the topic "Combating HIV in Indonesia: An Update", presented by three speakers, which discussed the ARV treatment updates and challenges in Indonesia, the overall HIV treatment updates worldwide, and the cascade of HIV care among key population in Indonesia. This session was moderated by Dr. dr. Irmansyah, Sp.KJ(K), the Head of the National Institute of Health Research and Development, Ministry of Health, Indonesia. In other parallel symposiums, we presented the early result of TRIPOD study and Updates for TB vaccine research and development



during the TB session; the emergence of Melioidosis in Indonesia during the Antibiotics Stewardship Program session; the evaluation of SoC Dengue diagnostic test during the Dengue management session; and the opportunistic infections and cancer in HIV patient during the co-morbidity & infectious disease session. One plenary lecture titled "Combating HIV-AIDS: Road to Cure in Future Perspective" was given by Tony Kelleher from INA-RESPOND's partner, Kirby Institute. In addition, Prof. dr. M. Hussein Gasem, PhD., Sp.PD-KPTI, the steering committee of INA-RESPOND who was the speaker during the meeting the expert session, discussed about the Acute Undifferentiated Fever Cases.

To sum up, it was a very interesting and informative event, and we thank all parties involved in making it happen. We are looking forward to having similar events in the future!



Merry Christmas and Happy New Year 2019



INA-RESPOND Newsletter

Infectious Disease News—Part 2

By: M. HELMI AZIZ



SCIENCE & HEALTH

Following up last month's article, this month's article will give us an update of studies related to the efficacy of probiotics for gastroenteritis and news related to the outbreaks of two pathogens in 2018.

THE BENEFIT OF PROBIOTICS FOR ACUTE GASTROENTERITIS

Acute gastroenteritis remains an important and common clinical illness that contributes to the second leading cause of death in pediatrics population worldwide. Optimal treatment with fluids to rehydrate minimizes the risk of mortality and other adverse outcomes. The use of antibiotics, antidiarrheal agents, and antiemetics is not recommended in children since these agents may cause harm during the disease. However, the use of probiotics (live microorganisms) has been endorsed due to the potency of clinical benefits through multiple mechanisms (e.g. immune modulation) for acute gastroenteritis. Nonetheless, the trials that supported the use of probiotics mostly had methodologic limitations such as small sample size, lack of quality control, questionable outcomes, and attrition biases; and even probiotics adverse reports were not reported. Therefore, two studies were conducted to evaluate

the effectiveness of probiotics in children (3–48 months) who had acute gastroenteritis.

PROGUT (Probiotic Regimen for Outpatient Gastroenteritis Utility of Treatment) trial was conducted in six Canadian-tertiary care, university-affiliated, pediatric emergency departments⁽¹⁾. In this multicenter, randomized, double-blind, placebo-controlled trial, two commercially available probiotic products were compared to placebo at reducing the severity of acute gastroenteritis symptoms⁽¹⁾. Participant received a 5-day course of combined *Lactobacillus rhamnosus* R0011 and *L. helveticus* R0052 at a dose of 4.0×10^9 colony-forming units (CFU) twice daily or placebo⁽¹⁾. The primary outcome was the occurrence of moderate-to-severe gastroenteritis which was determined using modified Vesikari scale symptom⁽¹⁾.

From 2013–2017, a total of 886 participants were enrolled and divided into probiotics and placebo group⁽¹⁾. 414 of 444 participants who were assigned to the probiotics group and 413 of 442 participants who were assigned to the placebo group completed the follow-up⁽¹⁾. Moderate-to-severe gastroenteritis occurred in 108 participants in probiotics group

and 102 participants in placebo group (Odds ratio (OR) = 1.06; confidence interval (CI) 0.77–1.46)⁽¹⁾. There were no significant differences between the probiotics group and placebo group in the median duration of diarrhea (52.5 hours [interquartile range (IQR): 18.3–95.8] and 55.5 hours [IQR: 20.2–102.3], respectively) or vomiting (17.7 hours [IQR: 0–58.6] and 18.7 hours [IQR: 0–51.6], respectively)⁽¹⁾. The PROGUT study found that twice-daily administration of combined *L. rhamnosus*–*L. helveticus* probiotics did not prevent the development of moderate-to-severe acute gastroenteritis⁽¹⁾.

The second study was a prospective, randomized, double-blind trial conducted at 10 geographically diverse, university-affiliated pediatric emergency departments in the United States⁽²⁾. Children who were presented with acute gastroenteritis were randomly assigned to *L. rhamnosus* group or placebo group. The *L. rhamnosus* group dose was 1×10^{10} CFU twice daily for five days⁽²⁾. Modified Vesikari scale was also used to determine the primary outcome which was the presence of moderate-to-severe gastroenteritis⁽²⁾.

971 participants were randomized and assigned to the *L. rhamnosus* group and placebo group⁽²⁾. Modified Vesikari scale score was nine or higher in 55 participants in the *L. rhamnosus* group and 60 participants in the placebo group (Relative risk (RR) 0.96, CI 0.68–1.35)⁽²⁾. There was no significant difference between the *L. rhamnosus* group and the placebo group in the duration of diarrhea, duration of vomiting, day-care absenteeism, or in the rate of household transmission⁽²⁾. The result of this study supported the previous study that a five-day course of probiotics administration did not have better outcomes than placebo in acute gastroenteritis⁽²⁾.

The big question now is: “Should we give probiotics as a treatment for diarrhea in children?”. More research needs to be done on which probiotics have the effect on acute gastroenteritis treatment and to determine the effects (positive and negative) of probiotics administration in acute gastroenteritis.

OUTBREAK(S)

In the past several years, there were some serious health threats and outbreaks occurred worldwide. This article highlighted two outbreaks that might concern the public health and global health security.

Mycobacterium chimaera

Since 2013, there have been over 100 severe cases of *Mycobacterium chimaera* (*M. chimaera*) infections in Europe, the USA, and Australia⁽³⁾. The epidemiological investigations shows a link to the use of specific heater-cooler units (HCUs) that are used to control the temperature within the extracorporeal circulation during cardiopulmonary surgery⁽³⁾. The non-tuberculous mycobacteria are ubiquitous in the environment and considered as opportunistic human pathogens⁽³⁾. In addition, this bacterium is intrinsically resistant to most classes of antibiotics and disinfectants which makes the infection is difficult to treat⁽³⁾.

The infection of *M. chimaera* has also been characterized by long latency period (more than six years from the surgery to the presentation of symptoms) and high mortality rate (46%–63%)⁽⁴⁾. Common symptoms that could occur include fever, malaise, weight loss, cough, dyspnea, splenomegaly, and chorioretinitis⁽⁴⁾. Bacterial culture for diagnosis may take between 2–8 weeks. Therefore, quantitative polymerase chain reaction is preferred⁽⁴⁾. The current guideline for *M. chimaera* treatment recommends using three- to five- drug regimens of antibiotics which include macrolide, rifamycin, ethambutol, moxifloxacin/clofazimine, and amikacin for 12–24 months⁽⁴⁾. In addition, material removal or exchange should be initiated⁽⁴⁾.

Ebola strikes back – rVSV-ZEBOV shots

By 4 December 2018, 458 Ebola virus disease (EVD) cases (410 confirmed and 48 probable) with 271 deaths had been reported in the Democratic Republic of the Congo⁽⁵⁾. Concerns have been raised on this second largest outbreak of EVD on record due to the disproportionate number of women and children infected during this outbreak⁽⁵⁾. Females accounted

for 62% (280/450) of overall cases (18 cases were pregnant, seven cases were breastfeeding the baby)⁽⁵⁾. In addition, 21 of 27 fatal cases occurred among infants less than one year of age (case fatality = 78%)⁽⁵⁾.

Sudan, Uganda, and Rwanda are three countries with a high risk of importing EVD from the Democratic Republic of the Congo. Therefore, WHO allocated rVSV-ZEBOV (live-attenuated recombinant vesicular stomatitis virus vaccine expressing the glycoprotein of Zaire Ebola virus) to South Sudan for ring vaccination strategy. The rVSV-ZEBOV was tested for its safety in 2015–2016 to 2,016 vaccinated participants in Guinea⁽⁶⁾. Adverse events three days after vaccination were found to be common. However, more data should be obtained regarding the use of the vaccine in pregnancy⁽⁶⁾. Despite the common mild-to-moderate adverse events, the vaccine was proven immunogenic in humans and effective in field studies. However, the duration of vaccine efficacy remained uncertain due to the limited time in trial design.

REFERENCES

1. Freedman SB, Williamson-Urquhart S, Farion KJ, Gouin S, Willan AR, Poonai N, et al. Multicenter Trial of a Combination Probiotic for Children with Gastroenteritis. *New England Journal of Medicine*. 2018;379(21):2015–26.
2. Schnadower D, Tarr PI, Casper TC, Gorelick MH, Dean JM, O’Connell KJ, et al. *Lactobacillus rhamnosus* GG versus Placebo for Acute Gastroenteritis in Children. *New England Journal of Medicine*. 2018;379(21):2002–14.
3. van Ingen J, Kohl TA, Kranzer K, Hasse B, Keller PM, Katarzyna Szafrńska A, et al. Global outbreak of severe *Mycobacterium chimaera* disease after cardiac surgery: a molecular epidemiological study. *The Lancet Infectious Diseases*. 2017;17(10):1033–41.
4. Medscape. Global Outbreak of *Mycobacterium Chimaera* Infections 2018 [
5. WHO. Ebola virus disease – Democratic Republic of the Congo 2018 [
6. Juan-Giner A, Tchaton M, Jemmy JP, Soumah A, Boum Y, Faga EM, et al. Safety of the rVSV ZEBEV vaccine against Ebola Zaire among frontline workers in Guinea. *Vaccine*. 2018.

INA-RESPOND Newsletter

Boost Your Daily Steps With Activity Tracker

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Compared with our parents, we spend an enormous amount of time in environments that limit our physical activity and require prolonged sitting positions. At work, we often sit in front of our computer. Cars or other vehicles often make us sit when we travel. At home, we spend a lot of time sitting, watching television while eating snacks. Offices, schools, homes, transportations, and public spaces have been re-engineered in ways that minimize human movement and muscular activity. These changes have a dual effect on human behaviour: people move less and sit more. From an evolutionary perspective, humans were designed to move—to locomote and engage in the manner of manual labor throughout the day.¹

From the article by dr. Ria Lestari titled “The Sitting Disease”, we know that physical inactivity contributes to 5.5% of death worldwide.² Indonesia National Health Survey, *Riset Kesehatan Dasar (Riskesdas) 2013* showed that 26.1% of Indonesia population in general had physical inactivity.³ The newest results from *Riskesdas 2018* showed no significant difference.⁴

This is bad news because physical activity improves musculoskeletal health and function, prevents cognitive decline, reduces symptoms of depression and anxiety, and helps individuals to maintain a healthy weight.⁵ Of course, because of our way of life, especially in Indonesia, it will be a financial burden for our country because we have to treat many diseases that could have been prevented.

Technology as Treatment

Modern technologies and their applications such as smart phones, computers, video games, and social media have increased sedentary time and decreased daily energy expenditure. However, modern technology can also be used to promote physical activities.⁶ Telephone interventions for physical activity reported significant behavioural improvements.⁷ Text messaging intervention to promote physical activity showed positive effect from various studies.⁸ Nowadays, self-monitoring devices such as heart rate monitors or pedometers can provide patients with instant positive feedback and motivations to increase physical activity.⁹

Activity Tracker

Worldwide Survey Of Fitness Trends for 2019 by American College of Sports Medicine (ACSM) placed Activity Tracker at the top of their list of 20 fitness trends above Group Training and High-intensity interval training (HIIT). The examples include fitness and activity trackers like those made by *Misfit, Garmin, Polar, Xiaomi, and Apple*.¹⁰

These devices can track heart rate, calories, sitting time, daily steps, and many more. Activity tracker first appeared as a fitness trend in 2016. It was ranked number two in 2016 and 2017 before dropping to number three in 2018.¹⁰ Is it possible that activity trackers can help a lot of people, especially those with sedentary lifestyle, to improve their physical activity? Every activity tracker has daily step counter, so why not start from there and try to improve our daily steps.



Daily Steps

One of the many functions of an activity tracker is to count our daily steps. When we walk or run, the activity tracker counts every step that we are taking. Large-scale physical activity data from a study that consisted of 68 million days of physical activity for 717,527 people from 111 countries across the globe reveal worldwide activity inequality.¹¹

Cool colors correspond to high activity (for example, Japan and China are blue) and warm colors indicate low levels of activity (for example, India is orange and Indonesia is red). In more walkable cities, activity is greater and throughout the week, across age, gender, and body mass index (BMI) groups, with the greatest increase in activity found for females.¹¹ In Jakarta, we often see bikers use the sidewalks without feeling guilty. Moreover, they will be angry if the pedestrian in front of them walks slowly. No wonder the number of daily steps in Indonesia, especially in Jakarta is very low.

Recommendations

Sedentary behaviour is any waking behaviour characterized by an energy expenditure ≤ 1.5 metabolic equivalents (METs), while in a sitting, reclining, or lying posture. For example, using electronic devices (e.g., television, computer, tablet, phone, video games) while sitting, reclining, or lying. Sitting in a bus, car, or train is also a sedentary behavior.¹² Low step counts also imply that individuals spend more time in sedentary behaviour. Counting steps (using pedometers or activity tracker) is widely accepted by researchers, practitioners, and the public alike to assess, track, and communicate physical activity doses.¹³

You probably start to think, “How many steps are enough?” Table 1 on the right shows the criteria by Tudor-Locke et al. The recommendation is to walk more than 10,000 steps every day.

Maximize your Activity Tracker

DiFrancisco-Donoghue et al. examined the use of activity tracker alone or combined with interventions. Throughout the study, the intervention groups were encouraged to compete with each other to get the highest number of daily steps. Their devices were synchronized so they could see others’ daily steps data. Furthermore, they set their goal to attain at least 10,000 daily steps which is equivalent to approximately 30-45 minutes of walking. The results showed that the overall mean of daily steps was greater in intervention group (about 1,000 steps higher).¹⁴

Zhao et al. used video games to motivate and improve physical activity. The results showed that based on the existing technologies and user needs, the idea of employing activity trackers for gamification of exercise and fitness was feasible, motivating, and engaging.¹⁵

Daily Steps	Criteria
<2,500	Basal activity
2,500-4,999	Limited activity
5,000-7,499	Low active
7,500-9,999	Somewhat active
10,000-12,499	Active
$\geq 12,500$	Highly active

Table 1. Steps recommendation by Tudor-Locke et al.

Setting a goal may be an effective behaviour change technique. For example, sedentary people can set their goal to get 7,500 daily steps when they start using the activity tracker. After one week, they add 500 more steps every week until they reach 10,000 daily steps. Meanwhile, active people can maintain their daily steps goal and will become more aware whether they are active or not by looking at their activity tracker.^{13,14,16} It has now become easy to monitor whether we have enough physical activity or not.



Choose your activity tracker

After you read this article, maybe you start to think about using an activity tracker, but what is the best activity tracker? Is it the expensive one, that costs you over 10 million Rupiahs? Or can you simply buy the one that costs 300 thousand Rupiahs?

Of course, it depends on your objective and needs. If you want to have an activity tracker that looks nice and has a lot of features, including water resistance, you should buy the high-end one. However, if you only want to monitor your daily steps, the more affordable one is enough. Lately, the validity and the reliability from various activity trackers are very good. So, wear your activity tracker and reach your daily target!

REFERENCES

- Owen N, Sparling PB, Healy GN, Dunstan DW, Matthews CE. Sedentary Behavior: Emerging Evidence for a New Health Risk. *Mayo Clin Proc* [Internet]. 2010;85(12):1138–41. Available from: <http://linkinghub.elsevier.com/retrieve/pii/S0025619611603686>
- WHO. Global Health Risks. Who [Internet]. 2009;9–27. Available from: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_part2.pdf
- Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar (RISKESDAS) 2013. Lap Nas 2013. 2013;1–384.
- Kemenkes. Hasil Utama Riset Kesehatan Dasar 2018. 2018;
- Who WHO. Global recommendations on physical activity for health. Geneva World Heal Organ [Internet]. 2010;60. Available from: <http://medcontent.metapress.com/index/A65RM03P4874243N.pdf%5Cnhttp://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Global+Recomendations+on+physical+activity+for+health#0>
- Chaddha A, Jackson EA, Richardson CR, Franklin BA. Technology to Help Promote Physical Activity. *Am J Cardiol* [Internet]. 2017;119(1):149–52. Available from: <http://dx.doi.org/10.1016/j.amjcard.2016.09.025>
- Eakin EG, Lawler SP, Vandelanotte C, Owen N, Pronk NP, O'Connor PJ, et al. Telephone Interventions for Physical Activity and Dietary Behavior Change. *Am J Prev Med* [Internet]. 2007;32(5):419–34. Available from: <http://linkinghub.elsevier.com/retrieve/pii/S0749379707000104>
- SW B, J W, D I, L F. Physical Activity Text Messaging Interventions in Adults: A Systematic Review (Provisional abstract). *Database Abstr Rev Eff* [Internet]. 2013;(4):163–73. Available from: <http://onlinelibrary.wiley.com/doi/cochrane/cldare/articles/DARE-12013051959/frame.html>
- Tate DF, Lyons EJ, Valle CG. High-tech tools for exercise motivation: Use and role of technologies such as the internet, mobile applications, social media, and video games. *Diabetes Spectr*. 2015;28(1):45–54.
- Walter RT. Worldwide Survey of Fitness Trends for 2019. *Am Coll Sport Med Heal Fit J* [Internet]. 2018;19(6):10–7. Available from: http://journals.lww.com/acsm-healthfitness/Fulltext/2015/11000/WORLDWIDE_SURVEY_OF_FITNESS_TRENDS_FOR_2016_10th.5.aspx
- Althoff T, Hicks JL, King AC, Delp SL, Biohub Z, Francisco S. Large-scale physical activity data reveal worldwide activity inequality. *Nature*. 2017;547(7663):336–9.
- Tremblay MS, Aubert S, Barnes JD, Saunders TJ, Carson V, Latimer-Cheung AE, et al. Sedentary Behavior Research Network (SBRN) - Terminology Consensus Project process and outcome. *Int J Behav Nutr Phys Act*. 2017;14(1):1–17.
- Tudor-Locke C, Craig CL, Thyfault JP, Spence JC. A step-defined sedentary lifestyle index: <5000 steps/day. 2013;114(November 2012):100–14.
- DiFrancisco-Donoghue J, Jung MK, Stangle A, Werner WG, Zwibel H, Happel P, et al. Utilizing wearable technology to increase physical activity in future physicians: A randomized trial. *Prev Med Reports* [Internet]. 2018;12(September):122–7. Available from: <https://doi.org/10.1016/j.pmedr.2018.09.004>
- Zhao Z, Etemad SA, Arya A. Results show that based on existing technologies and user needs, the idea of employing wearables activity trackers for gamification of exercise and fitness is feasible, motivating, and engaging. 2016;392(November). Available from: <http://link.springer.com/10.1007/978-3-319-24560-7>
- Ridgers ND, McNarry MA, Mackintosh KA. Feasibility and Effectiveness of Using Wearable Activity Trackers in Youth: A Systematic Review. *JMIR mHealth uHealth* [Internet]. 2016;4(4):e129. Available from: <http://mhealth.jmir.org/2016/4/e129/>

INA-RESPOND Newsletter

Follow Them Blindly & Let's Get Lost Together: The Importance of Critical Appraisal

By: ALY DIANA

First question first: Which personality type are you? The natural born leader or someone to follow blindly? If you are a natural born leader, then this article might not fit you, but you can still read it for fun. For someone to follow blindly, I am sure that you will follow me through the rest of this article anyway. And... This article will try to convince you how dangerous it can be to be a follower, and blindly on top of it, especially when we are talking about science.

In this recent world where we live in the ocean of information; with no critical thinking, we might be carried away to a totally different direction. We know that critical thinking/appraisal is needed to assess research reliability, credibility, value, and relevance to direct us in making vital decision. It is essential to combat information overload, to separate between good (trustworthy) and bad science.

I am sure that most of us know the theory around the critical appraisal, but sometimes, the follower's mentality might cloud our judgement. For example, we assume that the experts in the field would never produce bad science (we blindly trust the contents of articles if we see our 'favourite' names in the list of authors); we assume that systematic review or meta-analysis would be top science and can't be wrong; we assume that all articles in Nature or any other high impact journals are flawless. These assumptions are dangerous.

Another common error is taking the information presented in another paper without checking the original articles. This practice usually results in a scientific error cascade. People cite the wrong interpretations from the original paper and then share the information and create a new belief that the previously wrong interpretation is the new truth. I hope that the apparent dangers are clearer now. When we cite any articles in our published paper without carefully doing the critical appraisal and without appropriately extracting the information given, we may contribute to the production of false science and lead people to a wrong decision-making process.

Although some journal submissions require authors to also follow the recommended guidelines for a specific type of study (i.e. PRISMA, CONSORT, STROBE, MOOSE, STARD, or SPIRIT), it does not mean that all authors are required to follow the guidelines rigorously. It has been argued that editors find it a

practical burden and out of their competence to check all submitted articles, and most editors do not want to be the gatekeepers of the correct use of reporting guidelines. To this end, the obligation of adhering to publication guidelines relies solely on the (group of) author(s).

Therefore, it is our obligation as good researchers to double check and to critically appraise every single article that we will include in our paper. Only with such practice can we prevent bad science.

List of abbreviations:

GRADE (Grading of Recommendations Assessment, Development and Evaluation)

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses)

CONSORT (Consolidated Standards of Reporting Trials)

STROBE (STrengthening the Reporting of OBservational studies in Epidemiology)

MOOSE (Meta-analysis Of Observational Studies in Epidemiology)

STARD (STAndards for the Reporting of Diagnostic accuracy studies)

REFERENCES

Al-Jundi A & Sakka S. Critical Appraisal of Clinical Research. J Clin Diagn Res. 2017; 11(5): JE01-JE05.

Enhancing the QUALity and Transparency Of health Research (Equator). <http://www.equator-network.org/library/translations-of-reporting-guidelines/>

Johansen M & Thomsen SF. Guidelines for Reporting Medical Research: A Critical Appraisal. International Scholarly Research Notices. 2016. <http://dx.doi.org/10.1155/2016/1346026>

Mhaskar R, Emmanuel P, Mishra S, Patel S, Naik E, Kumar A. Critical appraisal skills are essential to informed decision-making. Indian J Sex Transm Dis AIDS. 2009; 30(2): 112-119.



OH, I'VE ALREADY FOUND A NATURAL BORN LEADER.
NOW I'M LOOKING FOR SOMEONE TO FOLLOW BLINDLY.



INA-RESPOND Newsletter

The Indonesia Research Partnership on Infectious Disease newsletter is an internal bulletin of INA-RESPOND research network intended to disseminate information related to the network's studies, activities, and interests to all members of the network as well as its sponsors and related parties.

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