INA-RESPOND

INDONESIA RESEARCH PARTNERSHIP ON INFECTIOUS DISEASE

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

NEWSLETTER

August 2018

NETWORK STEERING COMMITEE 3rd MEETING 2018

Data Analysis Plan: A Friend in Need is A Friend Indeed

CELEBRATING U=U. ENSURING NO ONE IS LEFT BEHIND

HIV Integrase Strand Transferase Inhibitors : Part 1

NATIONAL INSTITUTE OF HEALTH RESEARCH AND DEVELOPMENT
MINISTRY OF HEALTH REPUBLIC OF INDONESIA
2018

INA-RESPOND Steering Committee Meeting

8-9 August 2018

The Hermitage Hotel,

A Tribute Portfolio Hotel,

Jakarta

INA-RESPOND newsletter

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FEATURES

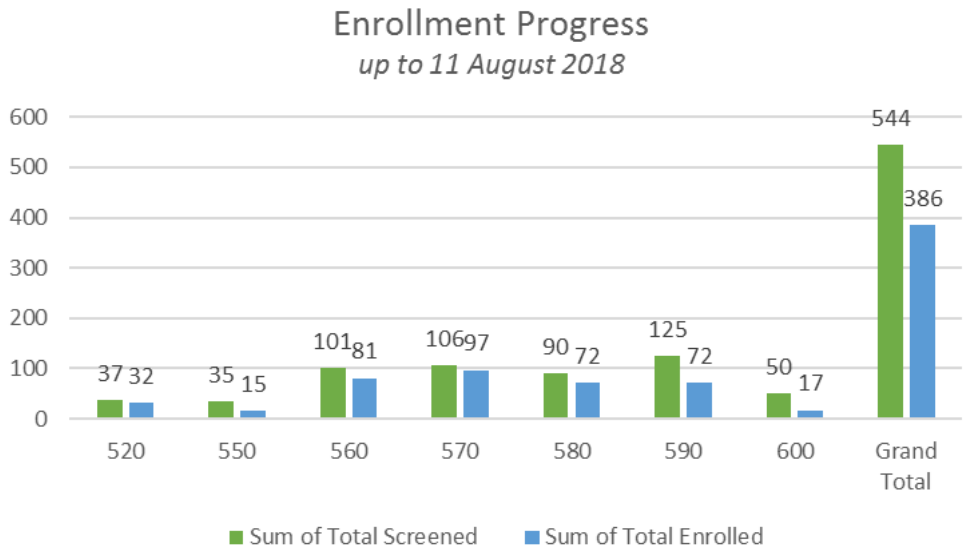
INA-RESPOND Newsletter

TRIPOD & INA-PROACTIVE Study Updates

By: ANANDIKA PAWITRI, LOIS E. BANG, M. IKHSAN JUFRI, VENTY MULIANA SARI

INA102 Screening and Enrolment

By 11 August 2018, all 7 sites had enrolled 386 subjects. Sites enrolled 71% of screened patients (544 screened patients).



Enrolment Target

We need to recruit 1,357 subject for the study. The study recruitment will end in February 2019, and the follow up will continue until 2.5 years after the last subject is enrolled. Currently, we have enrolled 386 subjects; this is 28.4 % based on our enrolment target. We have 6 months left and need to enrol 971 subjects to meet the enrolment target.

Sites updates

We have 6 active sites now (520 is still on hold due to the absence of study permission letter). At first, we planned to open 9 sites (now left, RSPI and RSHS). But according to the latest interim analysis and NSC meeting discussion, we have reached our main study objectives, thus we will not open these last 2 sites.

Site	First patient in	Aug	Sep	Oct	Nov	Dec	Jan-19	Feb-19	TOTAL
520	Feb-17	32	23	23	23	23	23	23	170
560	Feb-17	81	23	23	23	23	23	23	219
570	Mar-17	97	23	23	23	23	23	23	235
580	Mar-17	72	23	23	23	23	23	23	210
590	Nov-17	72	23	23	23	23	23	23	210
600	Dec-17	17	23	23	23	23	23	23	155
550	Dec-17	15	23	23	23	23	23	23	153
TOTAL		386	161	161	161	161	161	161	1357

Figure 2. Enrolment target number per site per month until site closure in February 2019.

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By now a total of 10 sites, as shown on figure 1, have been actively recruiting patients. A total of 461 out of 721 patients have been enrolled (26 pediatrics and 435 adults). Enrolment failures rate is 36,6% from total screenings due to some reasons as shown in figure 2.

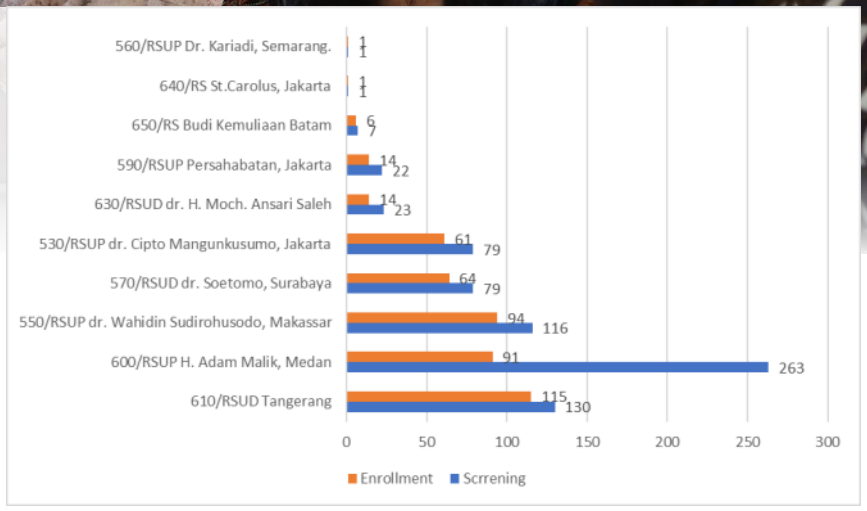

Figure 1. Enrolment Number from Sites

Reason	610	600	550	530	570	630	590	650	640	560	Total
HIV negative	-	-	-	-	-	1	-	-	-	-	1
Refuse to consent	2	-	1	-	4	-	1	-	-	-	8
Unwilling to comply with the study procedures	-	15	-	1	3	-	-	-	-	-	19
Plans to move away	-	4	3	2	-	1	-	-	-	-	10
Others:	13	153	19	14	8	7	7	1	0	0	222
A. No show	2	152	4	10	4	4	7	-	-	-	183
B. Busy (in a hurry)	11	1	10	3	4	2	-	1	-	-	32
C. Not cooperative	-	-	1	-	-	-	-	-	-	-	1
D. Has been enrolled	-	-	3	-	-	1	-	-	-	-	4
E. Unwell	-	-	1	-	-	-	-	-	-	-	1
F. No referral letter from others health facilities	-	-	-	1	-	-	-	-	-	-	1

Figure 2. Screening Failure Reasons

The following site visits have been conducted:

Site Assessment Visit (SAV) to RSUD Sorong on 13 August and to RSUD Jayapura on 20 August.

Site Preparation Visit (SPV) to site 660/RSUD A.W Sjahranie on 24-26 July.

Site Initiation Visit (SIV) to site 660/ RSUD A.W Sjahranie, Samarinda on 14 -15 August.

Site Monitoring Visit (SMV) to site 630/RSUD Moch. Ansari Saleh, Banjarmasin on 1 August 2018 and to site 590/RSUP Persahabatan, Jakarta on 20 August.

Currently Site 660 and Site 680 are working on final preparation for site activation. Hopefully, within two weeks these two sites will be activated as we are targeting a total of 12 activated sites by the end of September 2018. In addition, we are working on preparing RSUD Merauke and RSUD Zainoel Abidin sites.

Since 23 July, INA-PROACTIVE protocol Version 2.0 has been implemented, PIMA Analyzer (including beat controller and CD4 cartridge) and RDT (Oncoprobe and Alere) kit have been distributed to all sites. However, the CD4 examination still cannot be performed at some sites until the PIMA analyser is installed by vendor. Hopefully, by September the protocol version 2.0 can be fully implemented.

INA-RESPOND Newsletter

REPORT

INA-RESPOND Steering Committee Meeting

By: M. HELMI AZIZ, DEDY HIDAYAT

The Network Steering Committee (NSC) meeting was successfully held on 8–9 August 2018 at the Hermitage Hotel, Jakarta. The first day of the meeting focused on the study updates, future study, and publication progress; while on the second day, the meeting participants discussed the INA-RESPOND's strategic plan and non-study updates.

The INA-PROACTIVE protocol version 2.0 was implemented on 23 July 2018. So far, nine PROACTIVE sites have been activated, and 388 PROACTIVE subjects have been enrolled from eight sites. Three PROACTIVE sites are being prepared for activation, and INA-RESPOND Secretariat is working on nine more sites to join the study. Research assistants from five PROACTIVE sites have already started to input the research data to OpenClinica database. During the discussion, several topics were highlighted such as how to increase pediatric subject enrollment, the quality of viral load and CD4 testing, and the drug resistance HIV data.

An intense discussion happened during the TRIPOD study updates. The study primary objective, to estimate the proportion of multi-


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drug resistance (MDR) TB amongst new and previously treated TB cases, has been achieved by the TRIPOD team. However, several secondary objectives have not been completed. A consideration to stop the enrollment was discussed but the final decision will be made after the TB interim analysis meeting, which will be held in September 2018. In addition, the TRIPOD sites that have not been activated will be put on hold. In terms of the study results, the team should convince the policymakers regarding the findings of the MDR TB proportion.

PEER study did its interim analysis several days before the NSC meeting to reach the decision on subject diagnosis. The highlight of the PEER study was on how to achieve the target enrollment and whether the PEER team should expand the subject recruitment at type-C hospitals.

Scientific review was conducted for Schistosomiasis study and for the Dolutegravir study the team has been trying to register the drug to The National Agency of Drug and Food Control (BPOM / *Badan Pengawas Obat dan Makanan*).

Three new studies (AVIDITY/AVIDTRiL study, Biomarker study, and Dengue study) were proposed during the meeting. AVIDITY study, proposed by dr. Bachti Alisjahbana, will be conducted at type-C hospitals in three to four provinces in Java island. Procalcitonin and serum lactate levels will be used as the mortality predictor in Biomarker study, in addition, RNA or DNA will also be used to evaluate host response in this study. The Dengue study is considered overlapping with the currently written Dengue manuscript, the justification to conduct the study need to be further stated and evaluated. For the future events, INA-RESPOND will hold several events which are INA-RESPOND International Symposium (October 2018), HIV seminar update (December 2018), and INA-RESPOND Clinical Research Protocol Writing Workshop (2019).

The second day was mostly discussing the future of INA-RESPOND network. The decision on whether INA-RESPOND should expand its research to non-communicable disease has started an intense debate. The consideration related to funding, government support, the representative from non-communicable disease SC members, and clinical research unit establishment was the main reason the discussion has not reach any conclusion. INA-RESPOND is also asked to develop a journal/ magazine for international publication related to infectious disease.

INA-RESPOND Newsletter

CELEBRATING U=U, ENSURING NO ONE IS LEFT BEHIND

By: HERMAN KOSASIH

The 22nd International AIDS Conference was held in Amsterdam, Netherlands from 23-27 July 2018. Since the first conference that was convened during the height of the AIDS epidemic in 1985, this unique forum is an intersection of science, advocacy, and human rights, and attended by experts in these fields and policy makers with the same mission to end the epidemics. The theme of this conference is "Breaking Barriers, Building Bridges", hits on two important parts to fight the epidemics. Breaking the barriers so that everybody has access to HIV prevention and treatment without discrimination and building bridges highlight the importance to build solid partnerships in ending these epidemics.

Indonesia participated in this conference by having a special session discussing "Breaking barriers toward sustainability of AIDS response in Indonesia". In this session current situation and challenges of HIV control in Indonesia was discussed including the need to intensify efforts to reach key populations, challenges of community-based response, stigma, discrimination, and legal barriers to services and how to build bridges to break these barriers using several innovative approaches such as digital application for optimizing key population mobile testing, m-apps as a tool for young people to gain access to services, bringing HIV testing services closer through community-based screening, new-outreach model for female sex workers, and establishing partner-family ART supporters to enhance the adherence.

In addition, several booths from Indonesia were represented by Papua province and NGOs to de-

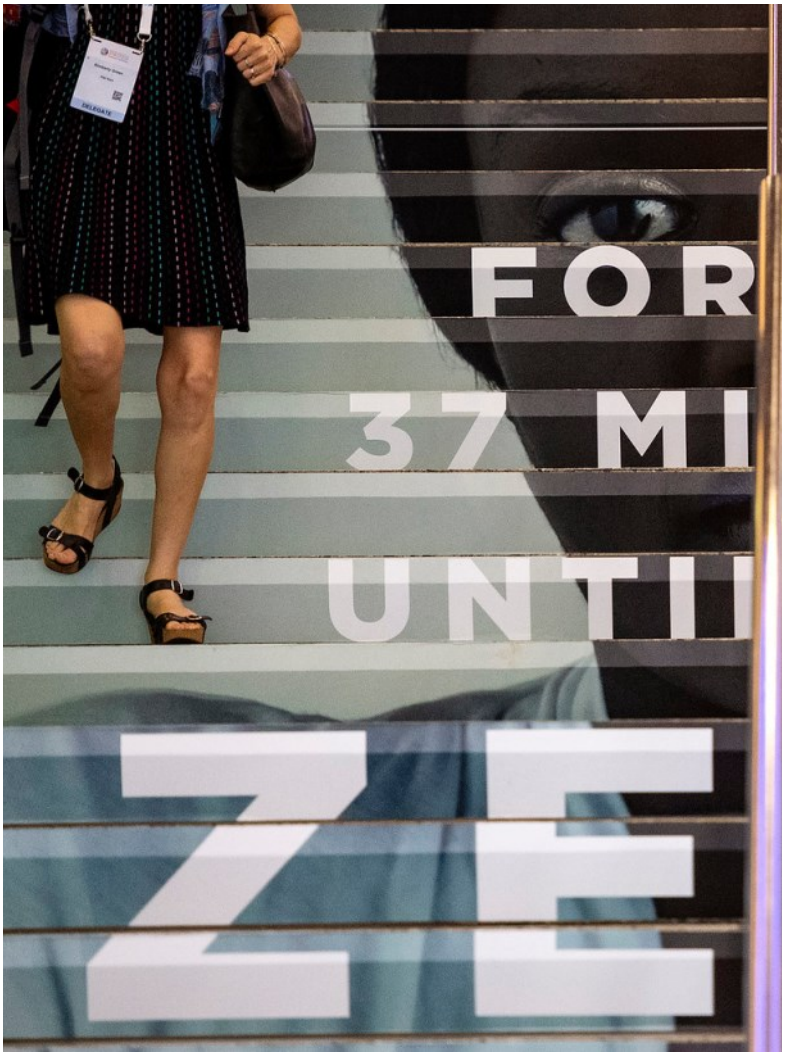


Photo credit to: ©International AIDS Society/Marten van Dijl/Steve

scribe the current challenges and their activities to end HIV/AIDS. Several HIV scientists, Dr Darma Imran, a neurologist from Cipto Mangunkusumo Hospital and Dr Rudi Wisaksana, one of our Pro-Active PIs also presented their studies.

The activities in the venue were mostly divided into: lectures, oral, and poster presentations, commercial exhibition, and social activities at a huge hall called 'global village' where HIV activists from all over the world shared their experiences.

In general, the scientific topics discussed during the meeting included basic and translational, epidemiology, prevention, clinical, social, and implementation research.

Many research in basic and translational research were related to HIV transmission and the development of protective vaccine and cure of HIV infection. These included the role of local microbiome for the transmission, broadly neutralizing antibodies, besieging virus reservoir, eliminating HIV latency, and vaccine discovery pipeline. Dr Anthony Fauci, the head of US-NIAID gave two very comprehensive and interesting talks. The first was on the 30-year progress of biomedical research innovations in the prevention, remission and cure of HIV/AIDS. The second talk discussed the progress and obstacles of two key paths towards remission, the use of intermittent, non-ART interventions, and the induction of durable, immune-mediated control of virus.

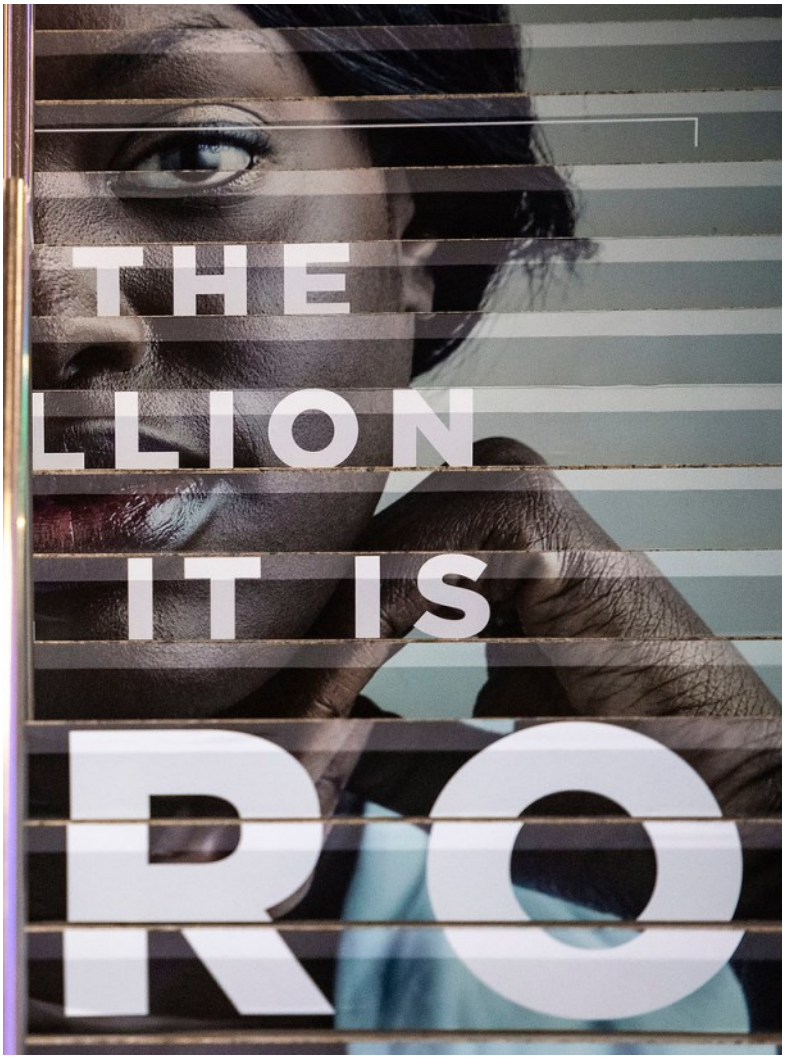
The highlight from prevention research is the success of pre-exposure prophylaxis (PrEP). According to the pro-

spective ANRS Prevenir study no incident HIV infections were observed during a mean follow-up of 7 months in 1594 high-risk individuals receiving FTC/TDF (PrEP)

Much of the treatment research presented during this conference revolved around promising results of integrase inhibitors, in particular dolutegravir (DTG). However, birth outcomes surveillance study among Botswanan women with and without HIV infection showed increase in prevalence of neural tube defects (NTDs) among infants exposed to dolutegravir (DTG) at conception. Since this finding is based on preliminary results, more data are required to confirm this association.

Another important finding in the field of treatment and prevention is the results of a prospective study called PARTNER2 that confirmed no linked transmissions occurred among more than 780 sero-discordant MSM couples who had sex without condoms during approximately 1600 couple-years of follow-up while the HIV-infected partner had undetectable virus (HIV-1 RNA < 200 copies/mL). This is a robust evidence to support the slogan "Undetectable equals to Untransmittable (U=U)". As such, the lives of people with HIV will never be the same. U=U has the power to transform HIV prevention and care, and liberate people from stigma and fear.

In social and political research, talks on knowing and resolving stigma, HIV and migrants' rights, criminalization, harm reduction and violence against key population were discussed, whereas topics in implementation research ranged from geo-mapping to enhance access



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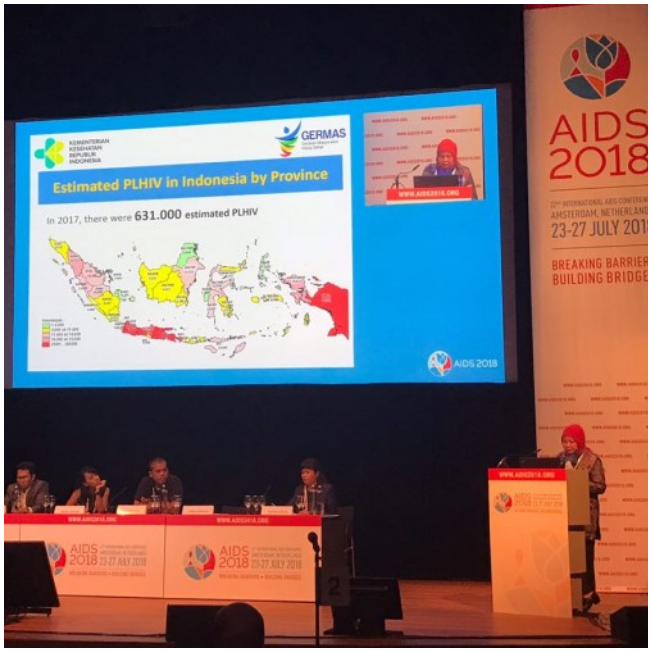
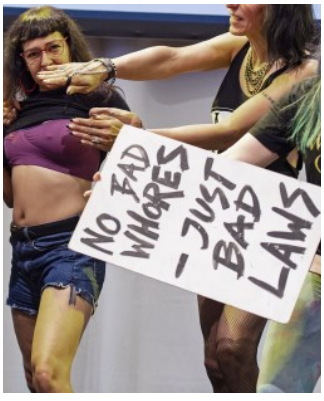


to testing and sustainability, community engagement in HIV research, cost-effectiveness for high impact HIV testing program in low and middle income countries, to improving retention on HIV programs.

Since 2014, significant progress has been made towards achieving the UNAIDS 90-90-90 target, but challenges remain in both the developed and developing world. But, we also need focus to the remaining 10-10-10 to ensure no one is forgotten in the fight against HIV. To name a few, these groups include adolescent and young members, as they are not able to access services due to cultural, legal and socioeconomic barriers like age of consent or recognition, key populations that are difficult to reach, indigenous people, and migrant workers

In summary, we may celebrate the advance of scientific findings, but we also need to realize the gaps in implementing these findings to those who need but have no access to. Those that cannot be left behind.



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INA-RESPOND Newsletter

PEER Interim Analysis and Mini Manuscript Writing Week

By: ANTONIUS ARDITYA PRADANA, YAYU NUZULURRAHMAH, NURHAYATI, M. HELMI AZIZ

The interim analysis meeting for PEER study was held on 4 August 2018. PIs, Co-PIs, and Research Assistants from each site attended the meeting. The meeting started with study updates and reports from each site about site management and its related issues. Then the meeting continued to develop the algorithm strategy to determine the probable etiology of pneumonia. The algorithm hierarchy were developed based on expert adjudication such as considered other epidemiologic studies and available guidelines. Using this algorithm and considering some factors (age, CBC and diff count, and clinical symptom), the site team will continue to discuss the etiology per subject at each site.

INA-RESPOND network and National Institute of Health (NIH) held Mini Manuscript Writing Week (MWW) for four days, starting from 4-7 August 2018 at the FKKMK *Universitas Gadjah Mada*, Yogyakarta. Only several groups from last year's MWW attended the mini MWW; they are the Salmonella group, Influenza Like Illness (ILI) group, and Chikungunya group. In addition, there were three new groups that joined this mini-MWW: Human Herpesvirus-6 (HHV-6) group, Fatal case group, and Toxoplasma group. Before all the groups started to work on their project, Dr. Chuen-Yen Lau gave a lecture on the relevance of the study and how it should be written in the manuscript. On the following day, Dr. Aaron Neal shared his experience on how to prepare proper figures and how to check whether your figures are compatible to be submitted in peer-reviewed journals.

The Salmonella group finished their data cleaning and started to write their first draft for the first review. dr. Cindy and dr. Bachti Alisjahbana's team worked very hard to finish the paper. Meanwhile, the ILI group led by dr. Abu Tholib Aman and Prof. Tri Wibawa has already established the database of their manuscript and started to format their manuscript into the targeted peer-reviewed journal. The Chikungunya group, who

was represented by dr. Patricia Tauran and Aaron Neal, has already formatted their manuscript and is preparing the proper figures to be submitted to the peer-reviewed journal.

The HHV-6 group led by dr. Ida Safitri Laksono, aimed to publish the new findings and new clades of HHV-6 to Journal Infectious Disease (JID). Acute Toxoplasma infection in immunocompetent person will be submitted as a case report and the data is still collected by dr. Venty Muliana Sari. Fatal case in acute febrile illness will be a collaboration project of site 510 and site 580 which both are contributed the most fatal cases in our AFIRE study. The fatal case will highlight the need for a proper diagnostic procedure for acute febrile illness patients in the hospital to improve the management and outcome of the patients.

It was an intense four-day writing workshop. We hope we could continue our work and publish good quality papers in peer-reviewed journals.

INA-RESPOND Newsletter

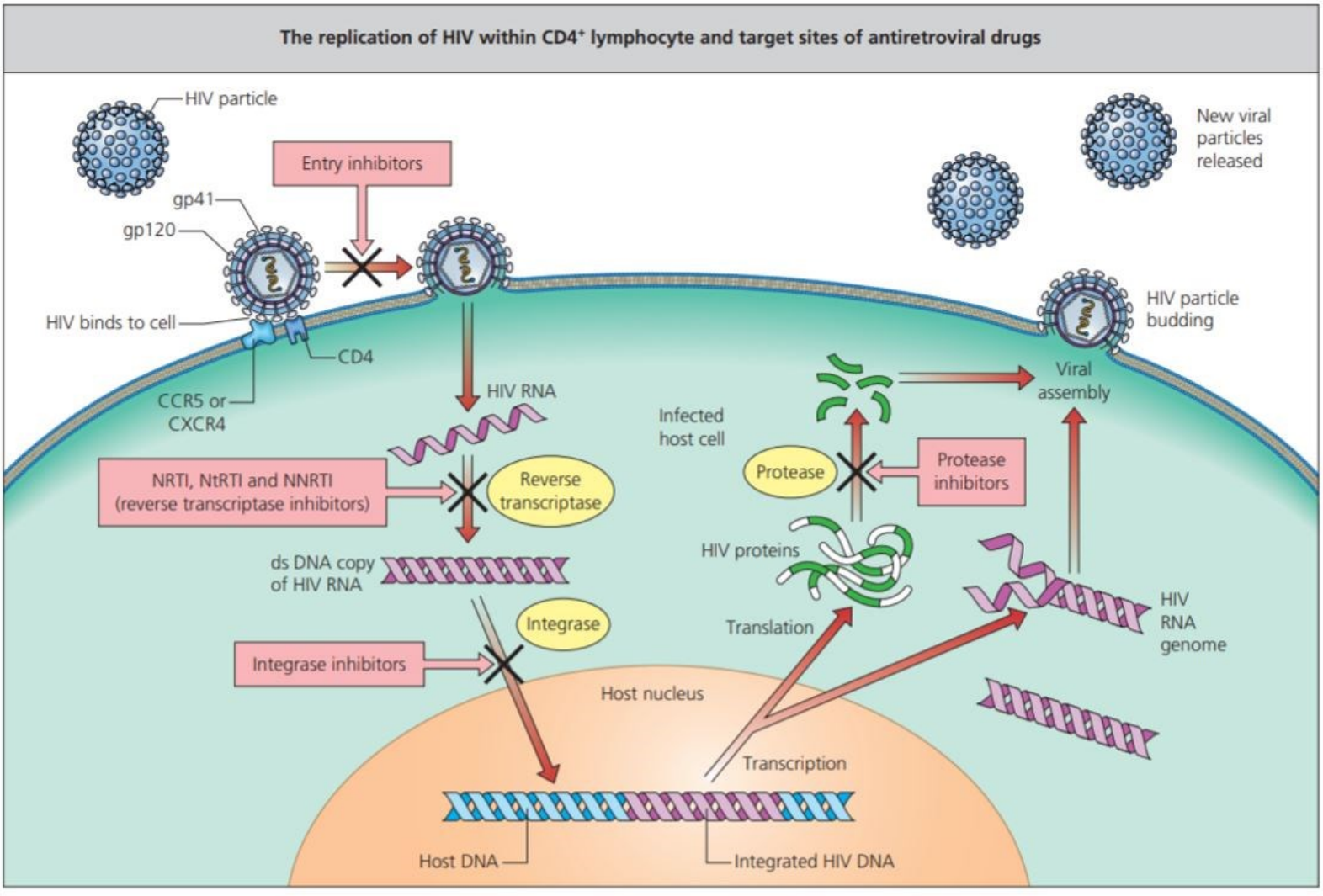
HIV Integrase Strand Transferase Inhibitors – Part 1

By: M.HELMI AZIZ

The new incidence of HIV has decreased since the discovery of antiretroviral (ARV) therapy. The ARV itself consists of several drug classes: nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTIs), protease inhibitors (PIs), entry inhibitors (fusion inhibitors and C-C chemokine receptor type 5 (CCR5) antagonists), and integrase strand transferase inhibitors (INSTIs) [1]. Each drug class has its own target as described in Figure1 [2]. According to the new guidelines developed by the Department of Health and Human Services (HHS), the new preferred regimens for adults and adolescents with HIV is the INSTIs-based regimens [1]. This month's article will talk about the pharmacology of INSTIs and elaborate more about three available types of INSTIs drugs: Raltegravir (RAL), Elvitegravir (EVG), and Dolutegravir (DTG).

The description of acquired immunodeficiency syndrome (AIDS) captured the attention of global community in 1981. Its etiological agent, the Human Immunodeficiency Virus (HIV), was characterized in 1983 [3], and Azidothymidine (AZT), a drug from NRTI class, was approved as a single HIV treatment in 1987 [3]. However, the resistance of AZT quickly emerged due to the virus's mutations in AZT's target, the reverse transcriptase (RT) [3]. Later, it was found that to minimize the resistance, a combination of drugs should be given (called Highly Active Antiretroviral Therapy (HAART)) [3]. However, the first combination of AZT and Lamivudine (3TC) was only approved 10 years after the AZT discovery [3].

HIV consists of structural (env), non-structural (gag-pol), and accessory proteins (Nef, Rev, Tat, Vif, Vpr, and Vpu) [3]. The replication of HIV requires both viral and cellular enzymes [3]. In addition, Integrase (IN) is one of viral enzymes encoded by pol gene along with RT and protease (PR) [3]. After HIV successfully attaches, fuses, and releases its viral core into the cytoplasm, the HIV RNA is reverse-transcribed into double-stranded (DS) viral DNA copy [3]. The DS viral DNA copy assembles into large nucleoprotein complex and combines with IN to create pre-integration complex (PIC) [3]. The PIC is translocated into the nucleus of the host, integrates with the viral genetic



material into the host's chromosome, and is sealed by the stranded transferase (ST) [3]. The INSTIs bind with the active site of IN and displace one end of the DS DNA, making it impossible for the viral DNA to be integrated into the host's chromosome [1, 2]. By inhibiting this process, the HIV replication and infection of other cells are also prohibited [1].

RALTEGRAVIR

Raltegravir is the first approved ARV INSTI agent in 2007 for treating HIV-1 in patients age 4 weeks and older. The current regimen comprises of combination of Raltegravir, Tenofovir, and Emtricitabine for treatment-naïve patients [1]. Several studies have compared the safety and efficacy Raltegravir-containing regimen with the standard of care-regimen (efavirenz) [1]. The STARTMRK trial compared Raltegravir (400 mg twice daily) regimen with Efavirenz (600 mg once daily) regimen which both have the same combination (standard doses of Tenofovir and Emtricitabine) for treatment-naïve patients who are HIV-positive and have HIV-1 viral load more than 5,000 copies/mL [1, 4]. The primary endpoint of the STARTMRK trial is to decrease viral load to fewer than 50 copies/mL [1, 4].

Raltegravir group achieved 86.1% of the primary endpoint, and Efavirenz group achieved 81.9%. Shorter time of viral suppression was reached in Raltegravir group [4]. The mean increase of CD4 cell count after 48 weeks was 189 cells/mm3 in the Raltegravir and 163 cells/mm3in the Efavirenz group [4]. Increased LDL levels were less in the Raltegravir group than in the Efavirenz group [4].

The SWITCH-ER study focused on the adverse reaction between Raltegravir-based regimen and Efavirenz-based regimen [5]. The randomized, double-blind, cross-over study included patients who were previously on Efavirenz-based regimen [5]. Regimen switch was performed after two weeks, and participants had better anxiety and stress scores after therapy with Raltegravir compared with Efavirenz [5]. Improvements in the patient's lipid profile were also detected on Raltegravir group. Later, 51% of the study participants elected to switch from

Efavirenz to Raltegravir upon completion of the SWITCH-ER study [5].

Raltegravir has also been proven to be safe and effective for adult with or without food. However, it is best to avoid taking drugs containing aluminum or magnesium such as antacids as they may reduce the Raltegravir concentrations in serum. Adverse reaction of Raltegravir including insomnia, headache, nausea, and creatinine kinase elevations due to rhabdomyolysis may occur.

Raltegravir is metabolized by UDP-glucuronosyltransferase (UGT) 1A1 enzyme. Therefore, co-administration with UGT 1A1 inducers (i.e.: Rifampin) may reduce the plasma levels of Raltegravir. In addition, co-administration with UGT 1A1 inhibitors may increase plasma levels of Raltegravir.

ELVITEGRAVIR

Elvitegravir was approved in 2012 as a combination of Elvitegravir/Cobicistat/Emtricitabine/Tenofovir [1]. It is recommended for treatment-naïve patients with creatinine clearance of 70 mL/min or grater [1]. Elvitegravir is metabolized by cytochrome 3A4. Cobicistat is an inhibitor of cytochrome 3A4 enzyme that helps to increase the plasma levels of Elvitegravir but does not have an antiretroviral effect [1].

Cohen et. al, conducted a randomized trial comparing Elvitegravir/Cobicistat based regimen with Efavirenz based regimen on treatment-naïve patients with viral load more than 5,000 copies/mL, CD4 cell count greater than 50 cells/mm3, and creatinine clearance above 80 mL/min [6]. Both regimens were administered daily [6]. After 48 weeks, 90% from Elvitegravir/Cobicistat group had viral load fewer than 50 copies/mL than the Efavirenz group (83%) [6]. Mean increase in CD4 count was also comparable with 205 cells/mm3 in the Elvitegravir/Cobicistat group and 139 cells/mm3 in the Efavirenz group after 48 weeks of therapy [6]. Elvitegravir/Cobicistat is a once-daily regimen, which may help to increase patient adherence than the Raltegravir-based regimen. Moreover, Elvitegravir has been proven as efficacious and easily tolerated as Raltegravir.

To be continued in the next edition: DOLUTEGRAVIR

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Which INSTIs drug needs to be administered at higher dose during the TB treatment with Rifampin?

A. Raltegravir
B. Elvitegravir
C. Dolutegravir

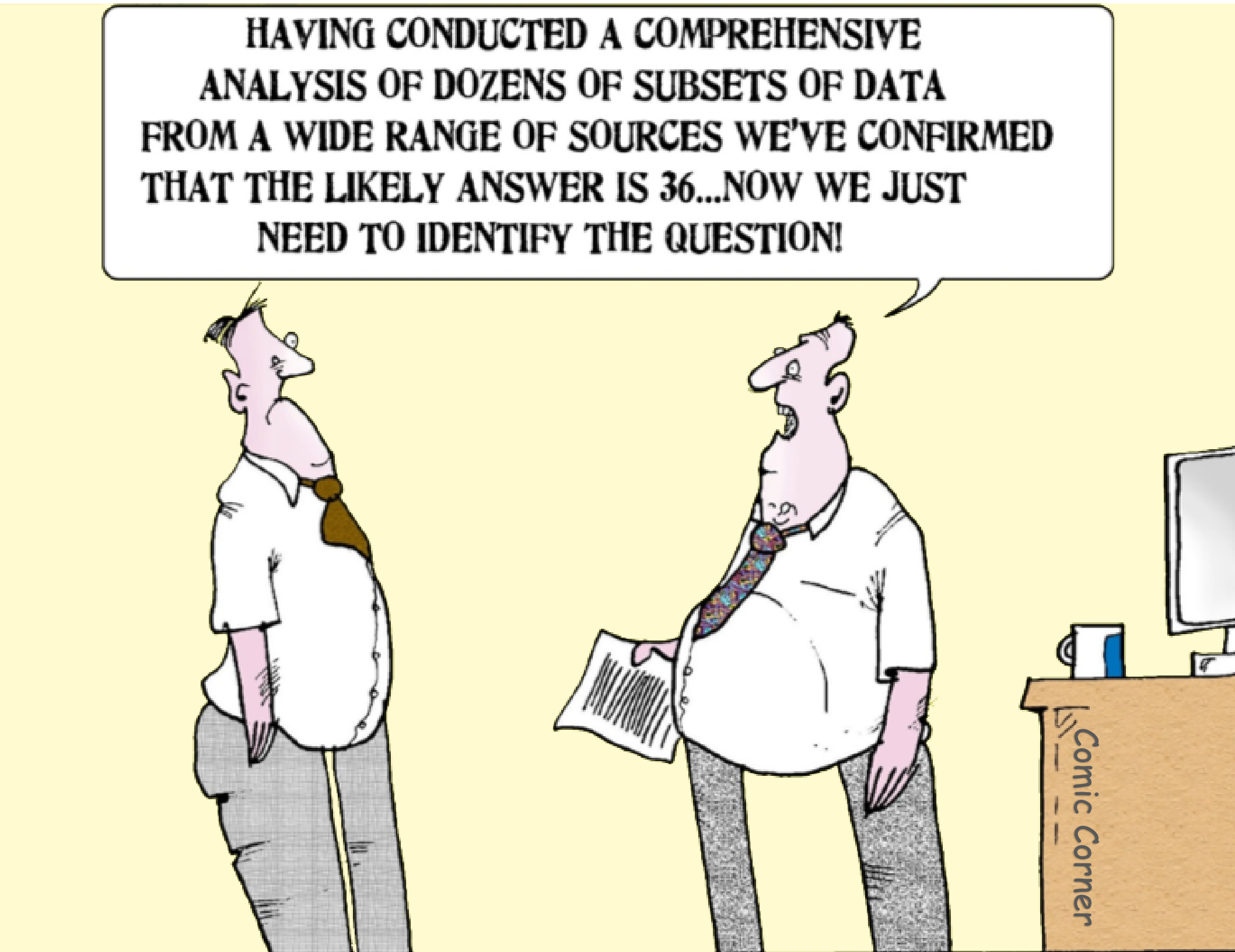
Which INSTIs drug needs to be discontinued in patients with creatinine clearance less than 50 mL/min?

A. Raltegravir
B. Elvitegravir
C. Dolutegravir

You would like to treat a treatment-naïve HIV patient with INSTIs regimen. During the anamnesis, you found out that the patient had arrhythmia and consuming dofetilide. Which INSTIs should not be given to this patient?

A. Raltegravir
B. Elvitegravir
C. Dolutegravir

Send your answers to: mhaziz@ina-respond.net before 10 September 2018 for a chance to win a prize!


HAVING CONDUCTED A COMPREHENSIVE ANALYSIS OF DOZENS OF SUBSETS OF DATA FROM A WIDE RANGE OF SOURCES WE'VE CONFIRMED THAT THE LIKELY ANSWER IS 36...NOW WE JUST NEED TO IDENTIFY THE QUESTION!
Comic Corner

INA-RESPOND Newsletter

Data Analysis Plan—A Friend in Need is A Friend Indeed

By: ALY DIANA

COMIC CORNER

Ideally, data analysis plan should be made before the data collection process starts. However, more often, we need to deal with a huge dataset. The big dataset has its own primary objective and data analysis plan, but many other secondary objectives can be developed using the same dataset. In an ideal or less ideal situation, just like building a house, we still need a blueprint before or after we have the materials. Therefore, no matter the situations are, when we want to answer any research questions or objectives, we need a data analysis plan.

In general, data analysis consists of inspecting, cleaning, transforming (if necessary), and modelling – with a clear goal of discovering useful information and answer the research questions, then informing conclusions/ recommendations, and supporting decision-making/improving public health program/policy. An analysis plan helps us to think through the data that we will collect/have already had, what we will use it for, and how we will analyse it. Then to make the plan, we need to understand our data and all variables we have. Creating an analysis plan is a way to ensure we have collected/had all the data we need and we use all data we collect.

Starting with the variables, we need to decide our variables of interests, how each variable interacts with the others - based on the plausible mechanism, previous studies, and state of the art of the research objectives. We also need to decide how we want to 'treat' a variable. For example, we need to choose whether we want to analyse age as a ratio-level variable (measured in years) or as an ordinal variable (categories of < 5 and ≥ 5 years). If we choose the latter, we have to acknowledge that we lose the ability to make comparisons across the entire age range and introduce more error into the data analysis. However, the final decision should be made based on strong arguments, which relate to our objectives. Then, we need to select most appropriate research methods and statistical tools. Please remember, at the end, we need to interpret results - so we don't want to damage ourselves by including variables or doing an analysis that we cannot explain.

Creating a good data analysis plan is an invaluable investment of time, it will ensure that we will get reliable analytic results if we follow the plan. However, sometimes (perhaps even most of the times), when we are doing data analysis, we suddenly get tempted to do something differently, adding a variable or two or excluding some. The temptation may lead us to data fishing/dredging (a practice of misusing data analysis to find patterns in data that can be presented as statistically significant), and we may ignore the science behind the data analysis. Therefore, it is important to treat data analysis plan as a blueprint for our study. It is easier to say than to do, especially when we find unexpected/negative results. But again, if we are confident in the science behind our analysis, we will not be afraid of the unexpected results.

Closing remarks: please spend a decent amount of time to make our data analysis plan, and once the plan has been agreed by all researchers involved in the study, be faithful! Presenting good science is much more important than presenting significant results.

References

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17TH OF AUGUST
Independence Day

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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